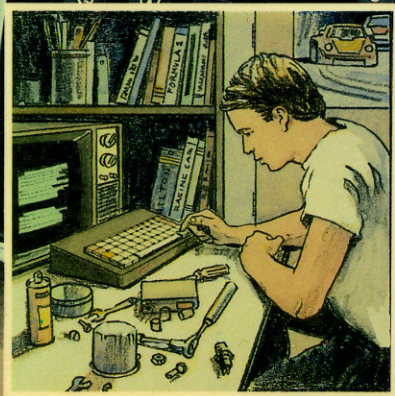
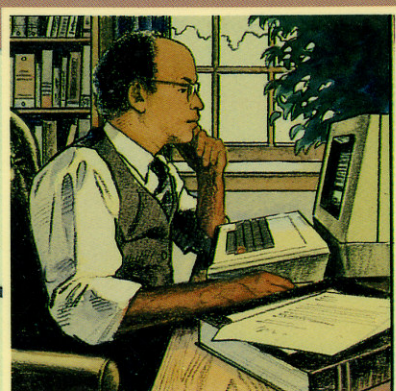


TI BASIC Computer Programs for the Home

Charles D. Sternberg



HAYDEN

TI BASIC
Computer Programs
for the Home



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Computer Programs
for the Home
Charles D. Sternberg



HAYDEN BOOK COMPANY, INC.
Hasbrouck Heights, New Jersey

EQUIPMENT NEEDED

To use the programs in this book on a TI-99/4A, you will need the following equipment:

- TI-99/4A and a black-and-white monitor or TV
- Printer (optional)

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TI BASIC
Computer Programs
for the Home

Introduction

The Purpose of This Book

Traditionally, home computers, when first purchased, have been used as interesting but expensive game-playing devices. That they have not been more frequently put to a more serious purpose stemmed from the lack of a readily available, comprehensive set of home application programs that were easy to use and understand and that satisfied the practical requirements of the home. The objective of this book is to provide a set of programs that will make your computer start paying for itself the moment it crosses your threshold. The programs provide a good cross section of practical applications that will make your computer beneficial to all family members. The applications have been designed so as not to rely upon the availability of tape or disk-storage devices or upon any other features that may not be easily come by. As you gain familiarity with computer use, moreover, modification of these programs to utilize features of your particular machine should present few difficulties.

The Book's Format

The computer applications given here have been formatted in a way that I hope will be of greatest value to you. Each application has been supplied with detailed information/documentation in the following form:

1. A narrative description of the application includes a brief explanation of the program's functions, data entry procedures, data formats, output descriptions, and suggested enhancements or comments, when appropriate.
2. A complete listing of the program is provided with remarks and data necessary for initialization. All line numbers have been incremented by ten (10) to insure ease of data entry and extension or modification.
3. A listing of sample data used for the example run illustrates the form of data entry and the results it produces.
4. Examples of outputs from the program using the sample data are shown. Whenever possible, the various optional outputs of the program are all shown.
5. All major variable names (symbols) used by the program are explained. In addition, all features of the program that may not be available in the tiniest versions of BASIC are listed and explained.

Entering/Interpreting the Programs

The programming approach decided upon for this book is meant to facilitate your ease of program interpretation and extension or modification. It does not take advantage of many language facilities that minimize program length or processing speed. Concise, highly efficient routines have been avoided as a rule because they generally result in a lack of interpretive clarity and the modularity necessary to facilitate modification and change. REMark statements have been used liberally to assist you in interpretation of the program's operation.

Initially, the programs should be entered and tested exactly as they are shown. As you gain familiarity with your machine and its language, you may wish to take advantage of its various memory and time-saving features, such as (1) eliminating extraneous spaces in the instructions, (2) variable dimensioning of arrays and FOR loops, and (3) placing multiple statements on a line (when clarity is not affected). Once a program has been entered, it should be thoroughly tested to insure your understanding of the data formats and the machine acceptability of all program instructions.

About TI BASIC and the TI-99/4A Home Computer

TI BASIC, which is the residence console BASIC language of the TI-99/4A home computer, is as powerful as any other versions of BASIC language available for other personal/home computers. It can handle most programming needs which may arise. However, due to its screen display size, which is 24 rows deep by 28 columns wide, some programs in this book have been designed for printer's output rather than screen output. Such programs are those that require an 80-column display; they are indicated as such in the programs.

This TI conversion was done by Mr. Rigas Papagolos, President of 99/4 Tri-State Users Group, Lincoln, Rhode Island.

1

Home Financial Programs

Check Book Balance
Household Budget
Household Expenses
Installment Payment Projection
Interest Received Projections
Mortgage Amount Projections
Mortgage Comparisons
Property Comparisons
Financial Records
Income Tax Recording
Stocks

CHECK BOOK BALANCE

Description

This program allows your computer to assist you in that onerous monthly task of balancing your checkbook against your bank statement. It allows you to enter deposits and checks outstanding to insure that all items are included in your balance. All required data is entered at the keyboard in response to program prompting.

Functions of the Program

The program first initializes the data for balances, deposits outstanding, and checks outstanding. As these items are entered, their total is accumulated. Following the completion of all required entries, the results are printed, and the final lines of output show the comparison between the bank's figures and your own.

Instructions for Use

Run the program and respond to the questions asked. You will need your bank statement and your checkbook stubs.

Data Entry

All data is entered in response to program prompting.

Output Description

See example output. The form of the output is similar to that provided for your use on the reverse of most bank statements.

Comments

The program will accept up to 20 deposits outstanding and 100 checks outstanding.

```
10 CALL CLEAR
20 REM CHECKBOOK BALANCING PROGRAM
30 REM DATA INITIALIZATION
40 M1=20
50 M2=100
60 DIM D(20)
70 DIM C1$(100)
80 DIM C(100)
90 PRINT "ENTER DATE OF THE STATEMENT":
100 INPUT D$
110 PRINT "ENTER BALANCE FROM BANK": "STATEMENT":
120 INPUT B
130 PRINT "ENTER DEPOSITS NOT CREDITED ON STATEMENT": "(ENTER 0 WHEN DONE)":
140 FOR I=1 TO M1
150 D(I)=0
160 INPUT D(I)
170 IF D(I)=0 THEN 200
180 DO=DO+D(I)
190 NEXT I
```

```

200 PRINT "ENTER CHECKS OUTSTANDING": "(CHECK NBR, AMOUNT)":
210 PRINT "ENTER 0 WHEN DONE":
220 M1=I-1
230 FOR I=1 TO M2
240 C1$(I)=" "
250 C(I)=0
260 INPUT C1$(I),C(I)
270 IF C1$(I)="0" THEN 300
280 CO=CO+C(I)
290 NEXT I
300 PRINT "SUBTRACT SERVICE AND OTHER": "CHARGES FROM YOUR CHECKBOOK":
310 PRINT "(DON'T FORGET OTHER ADDS AND": "SUBTRACTS SUCH AS AUTOMATIC":
320 PRINT "WITHDRAWALS, CHECK CHARGES,": "ETC.):":
330 M2=I-1
340 PRINT
350 PRINT "ENTER THE CURRENT BALANCE": "SHOWN IN YOUR CHECKBOOK":
360 INPUT B1
370 REM PRINT OF RESULTS
380 PRINT
390 PRINT "ALIGN FOR OUTPUT"
400 INPUT A$
410 PRINT
420 PRINT TAB(10);D$
430 REM
440 PRINT "STATEMENT BALANCE";TAB(21);"$";B
450 REM
460 PRINT "RECENT DEPOSITS NOT SHOWN"
470 FOR I=1 TO M1
480 PRINT TAB(16);D(I)
490 NEXT I
500 REM
510 PRINT " SUBTOTAL": " DEPOSITS";TAB(22);"$";DO
520 REM
530 PRINT TAB(15);"=====
540 PRINT "TOTAL ";TAB(22);"$";DO+B
550 REM
560 PRINT "CHECKS";TAB(16);"CHK";TAB(22);"AMOUNT": "OUTSTANDING"
570 REM
580 FOR I=1 TO M2
590 PRINT TAB(16);C1$(I);TAB(22);C(I)
600 NEXT I
610 PRINT TAB(16);"-----"
620 PRINT "SUBTOTAL CHECKS OUT $";CO
630 REM
640 PRINT "=====
650 PRINT "BALANCE EXPECTED": "IN CHECKBOOK";TAB(16);"$";DO+B-CO
660 PRINT "BALANCE IN": "CHECKBOOK";TAB(16);"$";B1
670 PRINT "*****"
680 PRINT " DIFFERENCE ";TAB(16);"$";DO+B-CO-B1
690 REM **PROGRAM TERMINATION POINT**
720 GOTO 720

```

```

ENTER DATE OF THE STATEMENT
7 1 1983
ENTER BALANCE FROM BANK
STATEMENT
21000000
ENTER DEPOSITS NOT CREDITED
STATEMENT
00000000
ENTER 0 WHEN DONE >
00000000
ENTER CHECKS OUTSTANDING
CHECK NBR AMOUNT
00000000
00000000
00000000
00000000
00000000

```


SUBTRACT SERVICE AND OTHER CHARGES FROM YOUR CHECKBOOK (DON'T FORGET OTHER ADDS AND SUBTRACTS SUCH AS AUTOMATIC WITHDRAWALS, CHECK CHARGES, ETC.)

ENTER THE CURRENT BALANCE SHOWN IN YOUR CHECKBOOK

? 369

ALIGN FOR OUTPUT

```

BALANCE FROM STATEMENTS $ 200
RECENT DEPOSITS NOT SHOWN
      JUN 7 1983
      100
      100
SUBTOTAL DEPOSITS          $ 200
TOTAL CHECKS OUTSTANDING  $ 400
      1111
      100
      100
SUBTOTAL CHECKS OUT      $ 30
BALANCE IN CHECKBOOK $ 370
**CHUNKY**
**CREDIT**
**BOOK**
**DIFFERENCE $ 369 *****
DIFFERENCE $ 1
  
```

MAJOR SYMBOL TABLE - CHECK BOOK BALANCE

I	NAME	DESCRIPTION	I
I	D()	ARRAY OF DEPOSITS NOT CREDITED	I
I	C1()	ARRAY OF CHECK NUMBERS OUTSTANDING	I
I	C()	ARRAY OF CHECK AMOUNTS OUTSTANDING	I
I	D\$	DATE OF BANK STATEMENT	I
I	B	BALANCE FROM BANK STATEMENT	I
I	M1	NUMBER OF DEPOSITS NOT CREDITED	I
I	M2	NUMBER OF CHECKS OUTSTANDING	I
I	B1	BALANCE IN CHECKBOOK	I
I	DO	TOTAL DEPOSITS OUTSTANDING	I
I	CO	TOTAL OF CHECKS OUTSTANDING	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	ARRAYS	SINGLE DIMENSION	I

HOUSEHOLD BUDGET

Description

This program will help you prepare your monthly budget. Information is entered using data statements and is retained for later analysis or review.

Functions of the Program

The program reads the budget categories and expense items from data items, as well as the month name abbreviations. It stores these items in arrays, determines the first month/year to print based upon your input, and then finds the starting point in the data items supplied. During processing, the items are read, totaled, and then printed. Note that you must define your budget categories for the program as shown in lines 1180–1230 of the program listing.

Instructions for Use

Before running the program, it is necessary to initialize the budget codes that you wish to use (or use the ones given here) and to provide the budget data items using DATA statements following the budget code “END” indicator.

Data Entry

All data is entered using DATA statements.

Data Formats

There are three types of data formats for this program:

1. The budget category codes are entered in the form:
Code, Category (Fixed, Variable, or Semivariable), Explanation
2. The master month entry is given by:
*, Month name abbreviation, Year
3. Budget expense items for the month are entered using the form:
Budget code, Amount, Explanatory comments

Note the END card.

Output Description

See example provided. Output will be printed for the number of months requested. A maximum of six months is possible, printed horizontally.

Comments

The number of budget expense codes in the program is currently limited to 20.

```

10 CALL CLEAR
20 REM HOUSEHOLD BUDGET PROGRAM
30 REM *****DATA INITIATION*****
40 M=10000
50 N=1
60 DIM M$(12)
70 M1=20
80 DIM C$(20)
90 DIM T$(20)
100 DIM D$(20)
110 DIM P(6,20)
120 REM *****INITIALIZE MONTH ARRAY*****
130 FOR I=1 TO 12
140 READ M$(I)
150 NEXT I
160 REM *****INITIALIZE BUDGET CATEGORIES*****
170 FOR I=1 TO M1
180 READ C$(I)
190 IF C$(I)="END" THEN 220
200 READ T$(I),D$(I)
210 NEXT I
220 M1=M1-1
230 REM *****DETERMINE MONTHS TO PRINT*****
240 PRINT "ENTER THE STARTING MONTH,";"YEAR FOR THE PRINT"
250 INPUT MO$,YO
260 FOR I=1 TO 12
270 IF MO$=M$(I) THEN 300
280 NEXT I
290 GOTO 240
300 PRINT "HOW MANY MONTHS SHALL I";"PRINT(MAXIMUM 2 MONTHS)"
310 NO=I
320 INPUT N1
330 IF N1>2 THEN 300
332 PRINT ":::::"
340 REM *****FIND STARTING RECORD*****
350 FOR I=1 TO M
360 READ CO$
370 IF CO$="END" THEN 1090
380 IF CO$<>"*" THEN 430
390 READ M1$,Y
400 IF MO$<>M1$ THEN 430
410 IF YO<>Y THEN 430
420 GOTO 460
430 NEXT I
440 REM *****
450 REM *****PROCESSING AREA*****
460 I=1
470 READ CO$
480 IF CO$="END" THEN 670
490 IF CO$<>"*" THEN 570
500 READ MO$,Y
510 N=N+1
520 PRINT
530 IF MO$=M$(N+NO-1) THEN 470
540 PRINT "MONTH IS MISSING FOLLOWING ";M$(NO+N-2)
550 N1=N-1
560 GOTO 470
570 REM *****DETERMINE ARRAY POSITION OF ITEM*****
580 READ A,DO$
590 FOR J=1 TO M1
600 IF CO$=C$(J) THEN 640
610 NEXT J
620 PRINT CO$;"",A;" IN MONTH";MO$;Y;"CANNOT BE RECOGNIZED"
630 GOTO 470
640 P(N,J)=P(N,J)+A
650 I=I+1
660 IF I<=M THEN 470
670 REM *****PRINTING ROUTINE*****
680 N1=N
690 PRINT

```

```

700 PRINT
710 PRINT "ITEM";
720 FOR J=1 TO N1
730 J1=J+NO-1
740 IF J1<=12 THEN 760
750 J1=J1-12
760 PRINT TAB(J*10+2);M$(J1);
770 NEXT J
780 PRINT
790 REM
800 FOR J=1 TO M1
810 IF J=1 THEN 840
820 IF T$(J)=T$(J-1)THEN 840
830 PRINT
840 PRINT D$(J);" ";T$(J);
850 FOR K=1 TO N1
860 PRINT TAB(K*10+2);P(K,J);
870 IF J=1 THEN 890
880 T(K)=T(K)+P(K,J)
890 NEXT K
900 PRINT
910 NEXT J
920 REM *****PRINT TOTAL LINES*****
930 FOR K=1 TO N1
940 PRINT TAB(K*10+2);"_____";
950 NEXT K
960 PRINT
970 PRINT "TOTAL EXP";
980 FOR K=1 TO N1
990 PRINT TAB(K*10+2);T(K);
1000 NEXT K
1010 PRINT
1020 REM
1030 PRINT "NET INCOME";
1040 FOR K=1 TO N1
1050 PRINT TAB(K*10+2);P(K,1)-T(K);
1060 NEXT K
1070 REM
1090 REM *****
1100 REM *****PROGRAM TERMINATION POINT*****
1110 END
1140 REM *****
1150 REM *****DATA FOR INITALIZATION FOLLOWS*****
1160 DATA JAN,FEB,MAR,APR,MAY,JUN,JUL,AUG,SEP,OCT,NOV,DEC
1170 DATA IN,IN,TOTAL/IN
1180 DATA H,F,RENT,U,F,UTILITIES
1190 DATA I,F,INSURANCE,P,F,PAYMENTS
1200 DATA F,S,FOOD,A,S,TRANS
1210 DATA M,S,REPAIRS,MD,S,MEDICAL
1220 DATA C,V,CLOTHING
1230 DATA E,V,EDUCATION,R,V,REC,S,V,SAVINGS,Q,V,OTHER
1240 DATA END
1250 REM *****BUDGET DATA FOLLOWS*****
1260 DATA *,JUN,1979
1270 DATA IN,850.2,WAGES
1280 DATA IN,100.50,COMM.
1290 DATA H,350,
1300 DATA U,195,,F,234.45,
1310 DATA I,45.55,LIFE INSURANCE
1320 DATA P,10.15,CHARGE CARD Y
1330 DATA P,23.45,FURNITURE
1340 DATA P,12.15,CHARGE CARD X
1350 DATA M,50,NEW WATER HEATER
1360 DATA MD,20,DENTAL VISIT-JIM
1370 DATA *,JUL,1979
1380 DATA IN,800.50,WAGES
1390 DATA H,350,,U,200,,I,45.55,,P,23.45,,S,100,,R,20,MOVIES
1400 DATA *,AUG,1979
1410 DATA IN,467.55,WAGES
1420 DATA H,375,,U,205,
1430 DATA END

```

```

ENTER THE STARTING MONTH,
YEAR FOR THE PRINT
HOURLY FOR THE PRINT
PRINT MAXIMUM MONTHS SHALL I
PRINT MAXIMUM MONTHS

```

ITEM	JUL	AUG
TOTAL IN IN	800.5	467.55
RENT	300.00	300.00
UTILITIES	100.00	100.00
FOOD	100.00	100.00
CLOTHING	100.00	100.00
OTHER	100.00	100.00
TOTAL EXP	739.00	580.00
NET INCOME	61.5	112.45

MAJOR SYMBOL TABLE - HOUSEHOLD BUDGET

```

I-----I
I NAME .. DESCRIPTION I
I-----I
I M$( ).. ARRAY OF MONTH NAMES I
I C$( ).. MASTER BUDGET CODES I
I T$( ).. MASTER EXPENSE TYPE CODES I
I D$( ).. MASTER BUDGET ITEM DESCRIPTIONS I
I P( ) .. BUDGET AMOUNTS (2 DIM ARRAY FOR PRINTS) I
I M1 .. MAXIMUM NUMBER OF BUDGET CATEGORIES I
I M0$ .. START MONTH FOR PRINTING I
I Y0 .. START YEAR FOR PRINTING I
I N1 .. NUMBER OF MONTHS TO PRINT I
I N0 .. POINTER TO STARTING MONTH NAME I
I C0$ .. TRANSACTION BUDGET CODE I
I A .. TRANSACTION AMOUNT I
I D0$ .. TRANSACTION EXPLANATION I
I N .. MONTH COUNT I
I T( ) .. MONTHLY TOTALS I
I M .. MAXIMUM NUMBER OF DATA READS I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME .. DESCRIPTION I
I-----I
I TAB .. FORMATS PRINT LINES I
I ARRAYS.. 2 DIMENSIONS I
I-----I

```

HOUSEHOLD EXPENSES

Description

This program will assist in the preparation of household expense reviews and analyses based upon actual-versus-budgeted expenses. In conjunction with the household budget program given previously, this program will be useful in getting the most for your dollar.

Functions of the Program

The program functions in the same way as the household budget program except that only one month is printed during each run of the program. In addition, you will be asked to enter the budget amount through the keyboard for each of the prompted expense categories. Note that the expense categories are defined by you as shown in lines 1140-1210 of the program listing.

Instructions for Use

To run this program, it is necessary to initialize the expense categories that you wish to use and to provide the data entries for the expenses incurred during the month. Note the sample data provided.

Data Entry

Expense data is entered using DATA statements, and budget information is entered through the keyboard.

Data Formats

There are three types of data formats available:

1. Expense category codes and their explanations are entered in the form:

Expense code, Category (Fixed, Variable, or Semivariable),
Explanation

2. Monthly entries require a heading record of the form:

*, Month name abbreviation, Year

3. Expense item entries are provided in the form:

Expense code, Amount, Explanatory comments

Note the END card.

Output Description

Two forms of output are available:

1. A detailed list of the month's expenses (complete with explanatory comments).
2. An analysis of the month's actual-versus-budgeted figures.

Comments

The number of expense category codes is currently limited to 20.

```

10 CALL CLEAR
20 REM  HOUSEHOLD EXPENSE ANALYSIS
30 REM  *****DATA INITIALIZATION*****
40 M=10000
50 DIM M$(12)
60 M1=20
70 DIM C$(20)
80 DIM T$(20)
90 DIM D$(20)
100 DIM P(20)
110 DIM B(20)
120 DIM D(20)
130 REM  *****INITIALIZE MONTH ARRAY*****
140 FOR I=1 TO 12
150 READ M$(I)
160 NEXT I
170 REM  *****INITIALIZE BUDGET/EXPENSES CATEGORIES*****
180 FOR I=1 TO M1
190 READ C$(I)
200 IF C$(I)="END" THEN 230
210 READ T$(I),D$(I)
220 NEXT I
230 M1=I-1
240 REM  *****DETERMINE MONTHS TO PRINT*****
250 PRINT "ENTER THE MONTH, YEAR FOR":"THE PRINT";
260 INPUT MO$,YO
270 FOR I=1 TO 12
280 IF MO$=M$(I) THEN 320
290 NEXT I
300 GOTO 250
310 NO=I
320 REM  *****ENTER BUDGET FIGURES*****
330 PRINT "FOR EACH CATEGORY PRINTED":"ENTER THE BUDGETED AMOUNT "
340 PRINT
350 FOR I=1 TO M1
360 PRINT D$(I);
370 INPUT B(I)
380 NEXT I
390 PRINT "SHALL I PROVIDE A DETAILED":"PRINT OF EXPENSES": "(Y OR N)";
400 INPUT A$
410 IF A$<>"Y" THEN 480
420 PRINT
430 PRINT
440 PRINT TAB(5);"**EXPENSE DETAIL**"
450 PRINT "ITEM";TAB(10);"AMT";TAB(20);"EXP."
460 PRINT "-----"
470 REM
480 REM  *****FIND STARTING RECORD*****
490 FOR I=1 TO M
500 READ CO$
510 IF CO$="END" THEN 1060
520 IF CO$<>"*" THEN 570
530 READ M1$,Y
540 IF MO$<>M1$ THEN 570
550 IF YO$<>Y THEN 570
560 GOTO 600
570 NEXT I
580 REM  *****
590 REM  *****PROCESSING AREA*****
600 I=1
610 READ CO$
620 IF CO$="END" THEN 760
630 IF CO$="*" THEN 760
640 REM  *****DETERMINE ARRAY POSITION OF ITEM*****
650 READ A,DO$
660 FOR J=1 TO M1
670 IF CO$=C$(J) THEN 710
680 NEXT J
690 PRINT CO$," ";A;" IN MONTH";MO$;Y;" CANNOT BE RECOGNIZED"
700 GOTO 610

```

```

710 P(J)=P(J)+A
720 I=I+1
730 IF A$(I)="Y" THEN 750
740 PRINT D$(J);TAB(10);A;TAB(17);D0$
750 IF I<=M THEN 610
760 REM *****ANALYSIS PRINT ROUTINE*****
770 N1=N
780 PRINT
790 PRINT
800 PRINT "*****"
810 PRINT TAB(10);M0$;Y0
820 PRINT "*****"
830 PRINT "ITEM";TAB(10);"BUDGET";TAB(17);"ACTUAL";TAB(24);"DIFF"
840 PRINT "-----"
850 REM
860 FOR J=1 TO M1
870 IF J=1 THEN 900
880 IF T$(J)=T$(J-1) THEN 900
890 PRINT
900 PRINT D$(J);" ";T$(J);
910 D(J)=P(J)-B(J)
920 PRINT TAB(8);B(J);TAB(14);P(J);TAB(21);D(J)
930 IF J=1 THEN 970
940 P0=P0+P(J)
950 B0=B0+B(J)
960 D0=D0+D(J)
970 NEXT J
980 REM *****PRINT TOTAL LINES*****
990 PRINT "-----"
1000 PRINT "          TOTAL EXPENSES";
1010 PRINT TAB(5);B0;TAB(13);P0;TAB(20);D0
1020 PRINT
1030 PRINT "          NET INCOME";
1040 PRINT TAB(6);B(1)-B0;TAB(13);P(1)-P0;TAB(20);D(1)-D0
1050 PRINT
1060 REM *****
1070 REM *****PROGRAM TERMINATION POINT*****
1080 PRINT
1090 PRINT
1100 STOP
1110 REM *****
1120 REM *****DATA FOR INITIALIZATION FOLLOWS*****
1130 DATA JAN,FEB,MAR,APR,MAY,JUN,JUL,AUG,SEP,OCT,NOV,DEC
1140 DATA IN,IN,INCOME
1150 DATA H,F,RENT,U,F,HEAT
1160 DATA I,F,INS.,P,F,PAY.
1170 DATA F,S,FOOD,A,S,AUTO
1180 DATA M,S,MAINT,MD,S,MED
1190 DATA C,V,CLOTHES
1200 DATA E,V,ED.,R,V,REC.,S,V,SAV.,O,V,OTHER
1210 DATA END
1220 REM *****BUDGET DATA FOLLOWS*****
1230 DATA *,JUN,1979
1240 DATA IN,850.2,WAGES
1250 DATA IN,100.50,COMM.
1260 DATA H,350,
1270 DATA U,195.,F,234.45,
1280 DATA I,45.55,LIFE
1290 DATA P,10.15,CHARGE Y
1300 DATA P,23.45,FURNITURE
1310 DATA P,12.15,CHARGE X
1320 DATA M,50,NEW HEATER
1330 DATA MD,20,DENTIST
1340 DATA *,JUL,1979
1350 DATA IN,800.50,WAGES
1360 DATA H,350.,U,200.,I,45.55.,P,23.45.,S,100.,R,20,MOVIES
1370 DATA *,AUG,1979
1380 DATA IN,467.55,WAGES
1390 DATA H,375.,U,205,
1400 DATA END

```


MAJOR SYMBOL TABLE - HOUSEHOLD EXPENSES

I	NAME	DESCRIPTION	I
I	M\$	.. MONTH NAME ARRAY	I
I	C\$()	.. MASTER EXPENSE CATEGORY CODES	I
I	T\$()	.. MASTER EXPENSE TYPE CODES	I
I	D\$()	.. MASTER EXPENSE CATEGORY DESCRIPTIONS	I
I	P()	.. EXPENSE PRINT ARRAY	I
I	B()	.. BUDGET PRINT ARRAY	I
I	D()	.. DIFFERENCE PRINT ARRAY	I
I	MO\$	.. MONTH TO PRINT	I
I	YO	.. YEAR OF MONTH TO PRINT	I
I	CO\$	.. TRANSACTION CATEGORY CODE	I
I	A	.. TRANSACTION AMOUNT	I
I	DO\$	.. TRANSACTION EXPLANATION	I
I	M1	.. MAXIMUM NUMBER OF EXPENSE CATEGORIES	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	PO	.. EXPENSE TOTAL	I
I	BO	.. BUDGET TOTAL	I
I	DO	.. DIFFERENCE TOTAL	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMAT PRINT LINES	I
I	ARRAY	.. SINGLE DIMENSION	I

INSTALLMENT PAYMENT PROJECTION

Description

This program produces projected monthly payment amounts for loans that are based upon monthly compounding of interest.

Functions of the Program

The program accepts inputs of amount to be borrowed, the number of payments desired, and interest rate information. It then calculates and prints the projected monthly payment.

Instructions for Use

Run the program and answer the questions asked by the program.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided. A projected monthly payment figure is printed.

```
10 CALL CLEAR
20 REM  INSTALLMENT PAYMENT PROJECTION
30 REM  *****COMPOUNDS MONTHLY*****
40 REM  *****DATA INITIALIZATION*****
50 PRINT "ENTER THE AMOUNT TO BE": "BORROWED"
60 INPUT A
70 PRINT "ENTER THE NUMBER OF MONTHLY PAYMENTS"
80 INPUT N
90 PRINT "IS THE INTEREST RATE PER": "MONTH (M) OR YEAR (Y)"
100 INPUT T$
110 PRINT "ENTER THE INTEREST RATE": "(PERCENT)"
120 INPUT I
130 I=I/100
140 IF T$="M" THEN 170
150 I=I/12
160 REM  *****CALCULATION*****
170 P=A*(I/(1-(1+I)^-N))
180 PRINT
190 PRINT "PROJECTED MONTHLY": "PAYMENT: "; P
200 REM  *****PROGRAM TERMINATION POINT*****
210 PRINT
220 PRINT
230 END
```

```
ENTER THE AMOUNT TO BE
BORROWED
1000
ENTER THE NUMBER OF MONTHLY
PAYMENTS
12
IS THE INTEREST RATE PER
MONTH (M) OR YEAR (Y)
M
ENTER THE INTEREST RATE
PERCENT
8
PROJECTED MONTHLY
PAYMENT: 87.45147677
```

MAJOR SYMBOL TABLE - INSTALLMENT PAYMENT PROJECTION

I	NAME	.. DESCRIPTION	I
I	A	.. AMOUNT OF PRINCIPAL (BORROWED)	I
I	N	.. NUMBER OF MONTHLY PAYMENTS	I
I	I	.. INTEREST RATE	I
I	P	.. RESULTING PROJECTED PAYMENT	I

INTEREST RECEIVED PROJECTIONS

Description

This program will assist you in analyzing potential investments. It estimates the future returns on an initial investment at a given interest rate.

Functions of the Program

The program initializes variables by requesting inputs through the keyboard. It allows various compounding strategies and will print the results after each compounding period, or at the end of each year. Following the input of all items requested, the program prints the initial information and then proceeds to calculate and print the results.

Instructions for Use

Run the program and answer the questions asked by the program.

Data Entry

All data is entered through the keyboard.

Output Description

See examples provided. A table of amounts and interest received, by period, is produced.

```
10 CALL CLEAR
20 REM      INTEREST RECEIVED PROJECTIONS
30 REM      *****DATA INITIALIZATION*****
40 PRINT "ENTER THE AMOUNT TO BE": "INVESTED"
50 INPUT I
60 PRINT "ENTER THE INTEREST RATE"
70 INPUT R
80 PRINT "ENTER THE NUMBER OF YEARS TO": "PROJECT"
90 INPUT N
100 PRINT "ENTER THE NBR OF TIMES PER": "YEAR THAT IT WILL BE": "COMPOUNDED"
110 INPUT C
120 IF C<>0 THEN 150
130 PRINT "COMPOUNDING MUST BE AT LEAST": "ONCE EACH YEAR"
140 GOTO 100
150 PRINT
160 A$="Y"
170 IF C=1 THEN 200
180 PRINT "SHALL I PRINT AFTER EACH": "COMPOUNDING PERIOD (Y OR N)?"
190 INPUT A$
200 PRINT
210 PRINT
220 PRINT "*****"
230 PRINT "INITIAL INVESTMENT $": I
240 PRINT "ANNUAL INTEREST RATE": R; "%"
250 PRINT "COMPOUNDED": C; "X PER YEAR"
260 PRINT "*****"
270 PRINT
280 PRINT TAB(5); "BEGIN"; TAB(13); "INTEREST"
290 PRINT "YR"; TAB(5); "AMOUNT"; TAB(14); "AMOUNT"; TAB(23); "TOTAL"
300 PRINT "-----"; TAB(13); "-----"; TAB(22); "-----"
310 R1=R*.01/C
320 T=I
330 FOR J=1 TO N
340 PRINT J;
```

```

350 T0=T
360 T4=0
370 FOR K=1 TO C
380 T1=T*R1
390 T2=INT((T1+.005)*100)
400 T1=T2/100
410 T4=T4+T1
420 T3=T
430 T5=T1
440 IF A$="Y" THEN 480
450 IF K<C THEN 490
460 T5=T4
470 T3=T0
480 PRINT TAB(4);T3;TAB(13);T5;TAB(21);T1+T
490 T=T+T1
500 NEXT K
510 PRINT
520 NEXT J
530 REM *****TERMINATION POINT*****
540 PRINT
550 PRINT
560 END

```

```

ENTER THE AMOUNT TO BE
INVESTED
ENTER THE INTEREST RATE
ENTER THE NUMBER OF YEARS TO
PROJECT
ENTER THE NBR OF TIMES PER
YEAR THAT IT WILL BE
COMPOUNDED
SHALL I PRINT AFTER EACH
COMPOUNDING PERIOD (Y OR N)?

```

```

*****
INITIAL INVESTMENT $ 1000
COMPOUNDED INTEREST RATE PER YEAR
*****

```

YR	BEGIN AMOUNT	INTEREST AMOUNT	TOTAL
1	1000	93.8	1093.8
2	1093.8	102.61	1196.41
3	1196.41	112.23	1308.64

MAJOR SYMBOL TABLE - INTEREST RECEIVED PROJECTIONS

I	NAME	DESCRIPTION	I
I	I	.. AMOUNT INVESTED	I
I	R	.. RATE OF INTEREST	I
I	N	.. NUMBER OF YEARS	I
I	C	.. NUMBER OF TIMES PER YEAR ITS COMPOUNDED	I
I	J	.. YEAR BEING COMPUTED	I
I	T3	.. BEGINNING AMOUNT FOR THE PERIOD	I
I	T5	.. INTEREST AMOUNT FOR THE PERIOD	I
I	T	.. BEGINNING AMOUNT FOR THE YEAR	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I

MORTGAGE AMOUNT PROJECTIONS

Description

This program will project monthly mortgage payments for any amount, interest rate, or mortgage term.

Functions of the Program

This program accepts keyboard input for the projected mortgage amount, interest rate, and number of years for the mortgage. It then produces a projected monthly payment that includes both principal and interest. After data is entered, the interest rate is converted for compounding purposes. Following the computations, the initial entries, as well as the projected monthly payment amount, are printed.

Instructions for Use

Run the program and answer the questions asked by the program.

Data Entry

All data is entered through the keyboard.

Output Description

See example output provided.

```
10 CALL CLEAR
20 REM   MORTGAGE COMPUTATION PROGRAM BASIC
30 REM   ***** DATA INITIALIZATION *****
40 PRINT "ENTER THE MORTGAGE AMOUNT"
50 INPUT P
60 PRINT "ENTER THE INTEREST RATE"
70 INPUT I1
80 IF I1>1 THEN 100
90 I1=I1*100
100 I=(I1/100)/12
110 PRINT "ENTER THE YEARS OF THE": "MORTGAGE"
120 INPUT Y
130 PRINT
140 PRINT
150 PRINT
160 REM   ***** COMPUTATION *****
170 M=I/((1+I)^(Y*12)-1)+I
180 M1=M*P
185 M1=INT(M1*100+.5)*.01
190 PRINT "*****"
200 PRINT "MORTGAGE AMOUNT $";P
210 PRINT "INTEREST RATE   "; I1; "%"
220 PRINT "MONTHLY PAYMENT $";M1
230 PRINT "*****"
240 REM   ***** PROGRAM TERMINATION *****
250 PRINT
260 PRINT
270 STOP
```

```

ENTER THE MORTGAGE AMOUNT
? 75000
ENTER THE INTEREST RATE
? 9
ENTER THE YEARS OF THE
MORTGAGE
? 30

```

```

*****
MORTGAGE AMOUNT $ 75000
INTEREST RATE 9 %
MONTHLY PAYMENT $
603.46
*****

```

MAJOR SYMBOL TABLE - MORTGAGE AMOUNT PROJECTIONS

I	NAME	DESCRIPTION	I
I	P	PROJECTED MORTGAGE AMOUNT	I
I	I1	INTEREST RATE	I
I	I	MODIFIED INTEREST RATE	I
I	Y	NUMBER OF YEARS FOR THE MORTGAGE	I
I	M1	MONTHLY PAYMENT	I

MORTGAGE COMPARISONS

Description

This program produces a table that compares various mortgage amounts, terms, and interest rates. The information is ideal for the prospective buyer or seller and allows him to compare various alternatives that may be available.

Functions of the Program

You are asked to indicate which of the items to vary first. Based upon your response to this question, the amounts, terms, and interest rates are entered. The example output shows the results of a run where the mortgage amount was varied.

Instructions for Use

Run the program and respond to the questions asked, through the keyboard.

Data Entry

All data is entered through the keyboard.

Output Description

See examples provided. The program produces a table of comparisons. They differ slightly in appearance depending upon the item being varied but all tables include the mortgage term, interest rate, mortgage amount, projected monthly payment, and total interest to be paid.

```
10 CALL CLEAR
20 REM   MORTGAGE COMPARISON PROGRAM
30 REM   NOTE ROUNDING ERRORS MAY OCCUR IN COMPUTED NUMBERS
40 REM   *****
50 REM   ***** DATA INITIALIZATION *****
60 PRINT "ENTER THE ITEM TO VARY": "AMOUNT(A), INT RATE(I), ": "OR YEARS(Y)"
70 S1=1
80 S2=1
90 S3=1
100 INPUT A$
110 REM ***** ENTRY OF VARIABLE ITEMS *****
120 IF A$<>"A" THEN 180
130 PRINT "ENTER THE BEGINNING AMOUNT, ": "ENDING AMOUNT TO CONSIDER"
140 INPUT AO,A1
150 PRINT "ENTER THE INTERVAL BETWEEN": "PRINTS I.E. 1000"
160 INPUT S1
170 GOTO 350
180 IF A$<>"I" THEN 240
190 PRINT "ENTER THE LOWEST,HIGHEST": "INTEREST RATE TO CONSIDER"
200 INPUT RO,R1
210 PRINT "ENTER THE INTERVAL BETWEEN": "PRINTS I.E. .25 FOR 1/4"
220 INPUT S2
230 GOTO 300
240 IF A$<>"Y" THEN 290
250 PRINT "ENTER THE LOWEST,HIGHEST": "NUMBER OF YEARS TO CONSIDER"
260 INPUT YO,Y1
270 PRINT "ENTER THE INTERVAL BETWEEN": "PRINTS I.E. 5 "
280 INPUT S3
```



```

ITEM TO VARY
INT RATE(I),
THE LOWEST, HIGHEST
RATE TO CONSIDER
THE INTERVAL BETWEEN
I.E. .25 FOR 1/4
THE MORTGAGE AMOUNT
THE YEARS OF THE

```

FOR A MORTGAGE OF 35 YEARS
USING THE INTEREST RATE 9.5
%

```

MORTGAGE MONTHLY PI TOTAL
AMOUNT PAYMENT INTEREST
-50000-- 410.805-- 122538.436
*****

```

USING THE INTEREST RATE 9.75
%

```

MORTGAGE MONTHLY PI TOTAL
AMOUNT PAYMENT INTEREST
-50000-- 420.294-- 126523.772
*****

```

USING THE INTEREST RATE 10 %

```

MORTGAGE MONTHLY PI TOTAL
AMOUNT PAYMENT INTEREST
-50000-- 429.836-- 130531.209
*****

```

MAJOR SYMBOL TABLE - MORTGAGE COMPARISONS

I	NAME	DESCRIPTION	I
I	S1	.. INTERVAL BETWEEN MORTGAGE AMOUNTS	I
I	S2	.. INTERVAL BETWEEN INTEREST RATES	I
I	S3	.. INTERVAL BETWEEN MORTGAGE YEARS	I
I	A0	.. FIRST AMOUNT CONSIDERED	I
I	A1	.. LAST AMOUNT CONSIDERED	I
I	R0	.. LOWEST RATE CONSIDERED	I
I	R1	.. HIGHEST RATE CONSIDERED	I
I	Y0	.. LOWEST NUMBER OF YEARS CONSIDERED	I
I	Y1	.. HIGHEST NUMBER OF YEARS CONSIDERED	I
I	P	.. SINGLE MORTGAGE AMOUNT	I
I	I1	.. SINGLE INTEREST RATE	I
I	Y	.. SINGLE YEAR TO CONSIDER	I
I	M1	.. MONTHLY PAYMENT COMPUTED	I
I	I3	.. TOTAL INTEREST PAID	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

PROPERTY COMPARISONS

Description

This program produces a table giving the monthly costs associated with a specific property. Included in the table is a computation of monthly principal-interest and monthly principal-interest-taxes-insurance. Also included is a projected total monthly cost of the property.

Functions of the Program

The program requests annual and monthly expense information concerning the property. Following this, the computation of monthly charges is accomplished, and a cost table is printed. At the end of each cost table, the program requests the name of the next property to consider. The program continues to request information on new properties until you provide a null response (press the return only) to the property name question.

Instructions for Use

Respond to the questions asked by the program. Be thorough in your entry of all relevant costs.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

Comments

The program's results will be only as good as the data provided.

```
10 CALL CLEAR
20 REM HOUSE COMPARISON PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=B"
60 REM ***** DATA INITIALIZATION *****
70 PRINT "ENTER PROPERTY NAME:"(JUST ENTER * WHEN DONE)"
80 RO=.005
90 N$=""
100 INPUT N$
110 IF N$="" THEN 770
120 PRINT "ENTER THE MORTGAGE AMOUNT"
130 P=0
140 INPUT P
150 PRINT "ENTER THE INTEREST RATE"
160 INPUT I1
170 IF I1>=1 THEN 190
180 I1=I1*100
```

```

190 I=(I1/100)/12
200 PRINT "ENTER THE YEARS OF THE";"MORTGAGE"
210 INPUT Y
220 PRINT "ENTER THE ANNUAL TAXES ON";"THE PROPERTY"
230 T=0
240 INPUT T
250 T=T/12
260 T=INT((T+R0)*100)
270 T=T/100
280 PRINT "ENTER THE ANNUAL INSURANCE";"COSTS FOR THE PROPERTY"
290 F=0
300 INPUT F
310 F=F/12
320 F=INT((F+R0)*100)
330 F=F/100
340 PRINT "ENTER THE ANNUAL MAINTENANCE";"AND REPAIR COSTS"
350 R=0
360 INPUT R
370 R=R/12
380 R=INT((R+R0)*100)
390 R=R/100
400 PRINT "ENTER ANY OTHER *MONTHLY*";"COSTS THAT APPLY"
410 S=0
420 INPUT S
430 PRINT "ENTER AVERAGE *MONTHLY*";"UTILITY COSTS"
440 U=0
450 INPUT U
460 PRINT
470 PRINT
480 PRINT
490 REM ***** COMPUTATION *****
500 M=I/((1+I)^(Y*12)-1)+I
510 M1=M*P
520 M1=INT((M1+R0)*100)
530 M1=M1/100
540 O=U+S+R
550 T1=M1+T+F
560 PRINT #1:"*****"
570 PRINT #1:
580 PRINT #1:N%;" INTEREST RATE";I1%;"% - MORTGAGE YEARS";Y
590 PRINT #1:
600 PRINT #1:"MORTGAGE";TAB(10);" P I";TAB(20);"TAXES";TAB(30);"INS";
610 PRINT #1:TAB(40);" PITI"
620 PRINT #1:"-----";TAB(10);"-----";TAB(20);"-----";TAB(30);
630 PRINT #1:"-----";TAB(40);"-----"
640 PRINT #1:P;TAB(10);M1;TAB(20);T;TAB(30);F;TAB(40);T1
650 PRINT #1:
660 PRINT #1:"UTILITIES";TAB(15);" MAINT";TAB(25);" OTHER";TAB(38);
670 PRINT #1:"OPERATING COSTS"
680 PRINT #1:"-----";TAB(15);"-----";TAB(25);"-----";
690 PRINT #1:TAB(40);"-----"
700 PRINT #1:U;TAB(15);R;TAB(25);S;TAB(40);O
710 PRINT #1:
720 PRINT #1:" TOTAL MONTHLY COSTS: $";O+T1
730 PRINT #1:
740 PRINT #1:"*****"
750 PRINT #1:
760 GOTO 70
770 REM ***** PROGRAM TERMINATION POINT *****
780 PRINT
790 PRINT
800 STOP
810 CLOSE #1

```

```

/ RUN
ENTER JUST ENTER * WHEN DONE >
9111 ANY ROAD STREET
35000 THE MORTGAGE AMOUNT
10 THE INTEREST RATE
10 THE YEARS OF THE
MORTGAGE
THE ANNUAL TAXES ON
PROPERTY
ANNUAL INSURANCE
THE PROPERTY
ANNUAL MAINTENANCE
REPAIR COSTS
ANY OTHER *MONTHLY*
WHAT APPLY
AVERAGE *MONTHLY*
COSTS
10

```

9111 ANY ROAD STREET INTEREST RATE 10 % - MORTGAGE YEARS 30

MORTGAGE	P I	TAXES	INS	PITI
35000	307.15	65.79	10.29	383.23

UTILITIES	MAINT	OTHER	OPERATING COSTS
155.1	83.33	40	278.43

TOTAL MONTHLY COSTS: \$ 661.66

```

ENTER PROPERTY NAME
<JUST ENTER * WHEN DONE >
*

```

** DONE **

MAJOR SYMBOL TABLE - PROPERTY COMPARISONS

I	NAME	DESCRIPTION	I
I	RO	.. ROUNDING CONSTANT	I
I	N\$	.. NAME OF PROPERTY	I
I	P	.. MORTGAGE AMOUNT	I
I	I1	.. INTEREST RATE	I
I	Y	.. NUMBER OF YEARS FOR THE MORTGAGE	I
I	T	.. ANNUAL TAXES	I
I	F	.. ANNUAL INSURANCE COSTS	I
I	R	.. ANNUAL MAINT/REPAIR COSTS	I
I	S	.. OTHER MONTHLY CHARGES	I
I	U	.. UTILITY COSTS	I
I	M1	.. PRINCIPAL AND INTEREST	I
I	T1	.. PRINCIPAL/INTEREST/TAXES/INSURANCE	I
I	O	.. TOTAL UTILITIES/MAINT/OTHER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I

FINANCIAL RECORDS

Description

Items such as credit card numbers and the contents of financial papers can cause significant difficulties if not immediately available or lost. This program was designed to assist you in recording important financial information. It allows for recording information concerning credit cards, insurance, securities, and property (mortgage) information.

Functions of the Program

The program accepts all entries from DATA statements previously provided and prints all entries, or selected categories of entries. A separate processing area exists for the handling of each type of record. In each area headings are printed, formatting is accomplished, and the items are printed.

Instructions for Use

Provide data entries for all items prior to running the program. The DATA formats differ slightly for each type of record.

Data Entry

All data is entered using DATA statements.

Data Formats

There are four data formats; each is described below.

1. Credit card entries:

C, Card name, Name issued to, Card number, Expiration date,
Credit limit, Address to notify in case of loss

2. Insurance entries:

I, Type insurance, Name issued to, Policy number, Date issued,
Amount, Company name and address

3. Securities:

S, Security type, Company, Quantity, Date purchased,
Purchase price, File location of security

4. Property (Mortgages):

M, Property location, Registered to, Mortgage years,
Purchase date, Amount, Mortgage holder

Output Description

See examples provided. The output can include all records or those of a specified type only.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```

10 CALL CLEAR
20 REM FINANCIAL RECORD PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=8"
60 REM ***** DATA INITIALIZATION *****
70 M=1000
80 PRINT "DO YOU WISH TO PRINT ALL":"ENTRIES (Y OR N)?"
90 INPUT A0$
100 IF A0$="Y" THEN 200
110 PRINT "SHALL I PRINT CREDIT":"CARDS(C), INSURANCE(I),"
120 PRINT "SECURITIES(S), OR":"MORTGAGES(M)?"
130 INPUT A1$
140 IF A1$="C" THEN 210
150 IF A1$="I" THEN 390
160 IF A1$="S" THEN 560
170 IF A1$="M" THEN 730
180 PRINT "INPUT NOT RECOGNIZED"
190 GOTO 80
200 REM ***** CREDIT CARD PROCESSING *****
210 PRINT #1
220 PRINT #1
230 PRINT #1
240 PRINT #1:"CREDIT CARD/LIMIT";TAB(25);"NAME/NOTIFY";TAB(45);"NUMBER";
250 PRINT #1:TAB(60);"EXP DATE"
260 PRINT #1:"-----";TAB(25);"-----";TAB(45);
270 PRINT #1:"-----";TAB(60);"-----"
280 FOR I=1 TO M
290 READ T$
300 IF T$="END" THEN 370
310 READ N$,H$,A$,D$,A,L$
320 IF T$<>"C" THEN 360
330 PRINT #1:N$;TAB(25);H$;TAB(45);A$;TAB(60);D$
340 PRINT #1:A$;TAB(25);L$
350 PRINT #1
360 NEXT I
370 IF A0$<>"Y" THEN 880
380 RESTORE
390 REM ***** INSURANCE PROCESSING *****
400 PRINT #1
410 PRINT #1:"INS TYPE/AMT";TAB(25);"INSURED/COMPANY";TAB(45);"POLICY #";
420 PRINT #1:TAB(60);"DATE"
430 PRINT #1:"-----";TAB(25);"-----";
440 PRINT #1:TAB(45);"-----";TAB(60);"-----"
450 FOR I=1 TO M
460 READ T$
470 IF T$="END" THEN 540
480 READ N$,H$,A$,D$,A,L$
490 IF T$<>"I" THEN 530
500 PRINT #1:N$;TAB(25);H$;TAB(45);A$;TAB(60);D$
510 PRINT #1:A$;TAB(25);L$
520 PRINT #1
530 NEXT I
540 IF A0$<>"Y" THEN 880
550 RESTORE
560 REM ***** SECURITIES PROCESSING *****
570 PRINT #1
580 PRINT #1:"SECURITY/PRICE";TAB(25);"COMPANY";TAB(45);"QTY";TAB(60);
590 PRINT #1:"DATE"
600 PRINT #1:"-----";TAB(25);"-----";TAB(45);
610 PRINT #1:"-----";TAB(60);"-----"
620 FOR I=1 TO M
630 READ T$
640 IF T$="END" THEN 710
650 READ N$,H$,A$,D$,A,L$
660 IF T$<>"S" THEN 700
670 PRINT #1:N$;TAB(25);H$;TAB(45);A$;TAB(60);D$
680 PRINT #1:A$;TAB(25);L$
690 PRINT #1
700 NEXT I

```



```

710 IF A0$<>"Y" THEN 880
720 RESTORE
730 REM ***** MORTGAGE PROCESSING *****
740 PRINT #1
750 PRINT #1:"PROPERTY/AMOUNT";TAB(25);"NAME";TAB(45);"YRS";
760 PRINT #1:TAB(60);"PRCH DATE"
770 PRINT #1:"-----";TAB(25);"-----";TAB(45);
780 PRINT #1:"-----";TAB(60);"-----"
790 FOR I=1 TO M
800 READ T$
810 IF T$="END" THEN 880
820 READ N$,H$,A$,D$,A,L$
830 IF T$<"M" THEN 870
840 PRINT #1:N$;TAB(25);H$;TAB(45);A$;TAB(60);D$
850 PRINT #1:A$;TAB(25);L$
860 PRINT #1
870 NEXT I
880 REM ***** PROGRAM TERMINATION POINT *****
890 PRINT
900 PRINT
910 STOP
920 REM ***** DATA ENTRIES FOLLO *****
930 DATA I,LIFE INSURANCE,JOHN A JONES,12-23456,JUNE 5 1979,30000
940 DATA ANY INSURANCE COMPANY TOPEKA KANSAS
950 DATA C,CARD BRAND X,JOHN OR JUDY DOE,22 786 28982 1,OCT 1980
960 DATA 500.00,CARD OFFICE BOX 1415 TOPEKA KANSAS
970 DATA S,COMMON STOCK,ABC CORP,100,JUN 5 1979,1234.46,SAFE DEPOSIT BOX
980 DATA C,CREDIT CARD Y,JOHN DOE,11 234 12,NOV 1980
990 DATA 1000,ABC INC BOX 123 MIAMI FLORIDA
1000 DATA M,1234 LORA PLACE,JOHN OR JUDY DOE,30,JUN 11 1979,35000
1010 DATA MORTGAGE AAA SERVICE DAYTON OHIO 42401
1020 DATA END
1030 CLOSE #1

```

```

>RUN
DO YOU WISH TO PRINT ALL
ENTRIES (Y OR N)?
? Y

```

CREDIT CARD/LIMIT	NAME/NOTIFY	NUMBER	EXP DATE
CARD BRAND X 500	JOHN OR JUDY DOE CARD OFFICE BOX 1415 TOPEKA KANSAS	22 786 28982 1	OCT 1980
CREDIT CARD Y 1000	JOHN DOE ABC INC BOX 123 MIAMI FLORIDA	11 234 12	NOV 1980

INS TYPE/AMT	INSURED/COMPANY	POLICY #	DATE
LIFE INSURANCE 30000	JOHN A JONES ANY INSURANCE COMPANY TOPEKA KANSAS	12-23456	JUNE 5 1979

SECURITY/PRICE	COMPANY	QTY	DATE
COMMON STOCK 1234.46	ABC CORP SAFE DEPOSIT BOX	100	JUN 5 1979

PROPERTY/AMOUNT	NAME	YRS	PRCH DATE
1234 LORA PLACE 35000	JOHN OR JUDY DOE MORTGAGE AAA SERVICE DAYTON OHIO 42401	30	JUN 11 1979

>RUN
 DO YOU WISH TO PRINT ALL
 ENTRIES (Y OR N)?
 ? N
 SHALL I PRINT CREDIT
 CARDS(C), INSURANCE(I),
 SECURITIES(S), OR
 MORTGAGES(M)?
 ? I

INS TYPE/AMT	INSURED/COMPANY	POLICY #	DATE
LIFE INSURANCE 30000	JOHN A JONES ANY INSURANCE COMPANY TOPEKA KANSAS	12-23456	JUNE 5 1979

MAJOR SYMBOL TABLE - FINANCIAL RECORDS

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	A1\$	PRINT INDICATOR	I
I	T\$	RECORD TYPE CODE	I
I	N\$	CARD NAME/INSURANCE/SECURITY TYPE/PROPERTY	I
I	H\$	NAME OF HOLDER	I
I	A\$	ACCT NBR/QTY/YEARS	I
I	D\$	DATE	I
I	A	AMOUNT/LIMITATION	I
I	L\$	LOCATION/ADDRESS	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINE	I

INCOME TAX RECORDING

Description

This program can assist you in recording/computing the various items required for State and Federal income tax reporting. While it cannot produce the completed forms for you (because of changing laws and forms), it can assist with the tedious job of accumulating your results.

Functions of the Program

The program initializes the various income/deduction categories first. As the program exists in the listing provided, the first eight items are considered to be income categories. Item number 8 is not defined. The remaining items are the expense (deduction) categories. All data items are read to accumulate income items. Following the completion of reading the income items, the data is restored and the process is repeated for the expense categories.

Instructions for Use

Prior to running the program, the income and deduction items must be entered using DATA statements.

Data Entry

All data is entered using DATA statements.

Data Formats

The format for both income and expense items is the same:

I or D, Detailed item type code, Amount, Explanation

See examples provided.

Output Description

See example provided. Output is produced in separate sections for income and deductions. Subtotals and totals are produced for all categories.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

Suggested Enhancements

This program could easily be modified to accept input from disk or tape files that were accumulated throughout the year.

Comments

The results will be no better than the data provided.

```

10 CALL CLEAR
20 REM INCOME TAX RECORDING PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9&00.DA=B"
60 REM *****
70 REM NOTE THIS PROGRAM CAN BE EXTREMELY USEFUL IN MAINTAINING
80 REM THE INFORMATION THAT YOU NEED TO PREPARE YOUR INCOME TAX,
90 REM AND IT WILL HELP YOU CATEGORIZE YOUR TAX FORM ITEMS. IT
100 REM CANNOT HOWEVER COMPUTE YOUR TAX FOR YOU. THE CHANGING TAX
110 REM LAWS AND FORMS REQUIRE YOUR DECISION MAKING IN THE PROCESS.
120 REM *****
130 REM ***** DATA INITIALIZATION *****
140 M=18
150 MO=10000
160 MI=8
170 DIM C1$(18)
180 DIM D1$(18)
190 C1$(1)="W"
200 D1$(1)="WAGES"
210 C1$(2)="B"
220 D1$(2)="BUSINESS/PROFESSION INCOME"
230 C1$(3)="F"
240 D1$(3)="FARM INCOME"
250 C1$(4)="I"
260 D1$(4)="INTEREST INCOME"
270 C1$(5)="D"
280 D1$(5)="DIVIDENDS"
290 C1$(6)="R"
300 D1$(6)="RENT/ROYALTY INCOME"
310 C1$(7)="O"
320 D1$(7)="OTHER INCOME"
330 C1$(9)="M"
340 D1$(9)="MOVING EXPENSES"
350 C1$(10)="C"
360 D1$(10)="CONTRIBUTIONS"
370 C1$(11)="I"
380 D1$(11)="INTEREST EXPENSES"
390 C1$(12)="T"
400 D1$(12)="TAXES PAID"
410 C1$(13)="MD"
420 D1$(13)="MEDICAL/DENTAL"
430 C1$(14)="CT"
440 D1$(14)="CASUALTY/THEFT"
450 C1$(15)="E"
460 D1$(15)="ENTERTAINMENT/TRAVEL"
470 C1$(16)="B"
480 D1$(16)="BUSINESS EXPENSE"
490 C1$(17)="MI"
500 D1$(17)="MISC EXPENSE"
510 C1$(18)="O"
520 D1$(18)="OTHER EXPENSES"
530 REM *** INCOME CATEGORIES ARE FIRST 8 POSITIONS OF THE ARRAY ***
540 REM ***** END OF CAREGORY ARRAY INPUTS *****
550 REM ***** PRINT OF INCOME ITEMS-BY CATEGORIES *****
560 PRINT "ALIGN TO TOP OF PAGE"
570 INPUT G$
580 PRINT #1:"***** INCOME *****"
590 FOR J=1 TO M1
600 PRINT #1:D1$(J)
610 FOR I=1 TO MO
620 READ T$
630 IF T$="END" THEN 700
640 READ C$,D,S$
650 IF T$<>"I" THEN 690
660 IF C$<>C1$(J) THEN 690
670 PRINT #1:TAB(5);S$;TAB(50);D
680 T1=T1+D
690 NEXT I
700 PRINT #1:TAB(42);"TOTAL";TAB(50);T1

```

```

710 T2=T2+T1
720 T1=0
730 PRINT #1:"-----"
740 RESTORE
750 NEXT J
760 RESTORE
770 PRINT #1:TAB(36);"TOTAL INCOME";TAB(50);T2
780 T2=0
790 T1=0
800 J0=J
810 REM ***** END OF INCOME - START DEDUCTION PRINT *****
820 PRINT #1:"***** DEDUCTIONS *****"
830 FOR J=J0 TO M
840 PRINT #1:D1$(J)
850 FOR I=1 TO M0
860 READ T$
870 IF T$="END" THEN 940
880 READ C$,D,S$
890 IF T$<>"D" THEN 930
900 IF C$<>C1$(J) THEN 930
910 PRINT #1:TAB(5);S$;TAB(50);D
920 T1=T1+D
930 NEXT I
940 PRINT #1:TAB(42);"TOTAL";TAB(50);T1
950 PRINT #1:"-----"
960 T2=T2+T1
970 T1=0
980 RESTORE
990 NEXT J
1000 PRINT #1:TAB(32);"TOTAL DEDUCTIONS";TAB(50);T2
1010 T2=0
1020 T1=0
1030 REM *****
1040 REM ***** DATA ENTRIES FOR INITIALIZATION *****
1050 REM ***** DATA ENTRIES FOLLOW *****
1060 DATA I,W,13.45,EMPLOYER 1
1070 DATA I,W,8900.46,EMPLOYER 2
1080 DATA I,I,.09,BANK OR SAVINGS AND LOAN 1
1090 DATA I,B,14.35,SIGN PAINTING FOR XYZ CORP
1100 DATA I,B,13.63,SIGN PAINTING FOR COMPANY XYZ
1110 DATA I,D,.41,DIVIDEND PAID BY ABC INC.
1120 DATA D,C,14.89,CHURCH ABC
1130 DATA D,C,15.12,XYZ CHARITY
1140 DATA D,MD,200.00,DOCTOR Z FOR HOSPITAL VISIT
1150 DATA D,MD,50.,DENTIST Q FOR FILLINGS
1160 DATA D,I,45.00,AAA CREDIT CORP
1170 DATA D,CT,13.89,THEFT OF TAPE RECORDER
1180 DATA D,MI,2.50,INCOME TAX PREPARATION
1190 DATA D,E,13.45,BUSINESS LUNCH ON 12 JUN WITH MR X-MR Y
1200 DATA D,B,12.10,PAINT FOR SIGN PAINTING
1210 DATA END
1220 CLOSE #1

```

>RUN

ALIGN TO TOP OF PAGE

?

***** INCOME *****

WAGES

EMPLOYER 1	13.45
EMPLOYER 2	8900.46
TOTAL	8913.91

BUSINESS/PROFESSION INCOME

SIGN PAINTING FOR XYZ CORP	14.35
SIGN PAINTING FOR COMPANY XYZ	13.63
TOTAL	27.98

FARM INCOME

TOTAL	0
-------	---

INTEREST INCOME		
BANK OR SAVINGS AND LOAN 1		.09
	TOTAL	.09

DIVIDENDS		
DIVIDEND PAID BY ABC INC.		.41
	TOTAL	.41

RENT/ROYALTY INCOME		
	TOTAL	0

OTHER INCOME		
	TOTAL	0

	TOTAL	0

	TOTAL INCOME	8942.39
***** DEDUCTIONS *****		
MOVING EXPENSES		
	TOTAL	0

CONTRIBUTIONS		
CHURCH ABC		14.89
XYZ CHARITY		15.12
	TOTAL	30.01

INTEREST EXPENSES		
AAA CREDIT CORP		45
	TOTAL	45

TAXES PAID		
	TOTAL	0

MEDICAL/DENTAL		
DOCTOR Z FOR HOSPITAL VISIT		200
DENTIST Q FOR FILLINGS		50
	TOTAL	250

CASUALTY/THEFT		
THEFT OF TAPE RECORDER		13.89
	TOTAL	13.89

ENTERTAINMENT/TRAVEL		
BUSINESS LUNCH ON 12 JUN WITH MR X-MR Y		13.45
	TOTAL	13.45

BUSINESS EXPENSE		
PAINT FOR SIGN PAINTING		12.1
	TOTAL	12.1

MISC EXPENSE		
INCOME TAX PREPARATION		2.5
	TOTAL	2.5

OTHER EXPENSES		
	TOTAL	0

	TOTAL DEDUCTIONS	366.95

MAJOR SYMBOL TABLE - INCOME TAX RECORDING

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF CATEGORIES	I
I	M0	MAXIMUM NUMBER OF DATA READS	I
I	M1	NUMBER OF INCOME CATEGORIES	I
I	C1\$()	MASTER CATEGORY CODE ARRAY	I
I	D1\$()	MASTER CATEGORY DESCRIPTION ARRAY	I
I	T\$	INCOME/DEDUCTION CODE	I
I	C\$	TRANSACTION CATEGORY CODE	I
I	D	TRANSACTION AMOUNT	I
I	S\$	TRANSACTION DESCRIPTION	I
I	T1	SUBTOTAL INCOME/DEDUCTIONS	I
I	T2	TOTAL INCOME/DEDUCTIONS	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINE	I
I	ARRAYS	SINGLE DIMENSION	I

STOCKS

Description

This program can assist the investor in analyzing and keeping track of current holdings. There are three options available:

1. Listing transactions
2. Listing current holdings after computing the results of all buy/sell transactions and stock splits
3. Producing a profit/loss analysis for specific stocks owned.

Functions of the Program

The program accepts all entries from DATA statements, interprets the transaction code, and produces the listing desired. The data expected for each type of transaction differs as shown below.

Instructions for Use

Transactions are entered in DATA statements prior to running the program. The data should be updated as transactions occur but can be gathered and entered just prior to a run.

How to Enter Data

All data is entered using DATA statements.

Data Formats

See examples. Data formats differ for each transaction type, as follows:

1. Buy transactions:
B, Company name, Stock symbol, Exchange, Date purchased,
Price per share, Quantity of shares, Commission paid
2. Sell transactions:
S, Company name, Stock symbol, Exchange, Date purchased,
Price per share, Quantity, Commission paid
3. Dollar dividends:
D, Stock symbol, Dividend amount per share, Date of dividend,
Shares of record for dividend
4. Share dividends:
SD, Dividend per share, Date of dividend,
Shares of record for dividend
5. Stock splits:
SS, Shares after split, Shares before split, Date of Split,
Shares of record for split

Output Description

See examples provided. Three forms of output are available; each has easily readable headings for clarity and ease of interpretation.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)


```

10 CALL CLEAR
20 REM STOCK MARKET RECORD PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=B"
60 REM ***** DATA INITIALIZATION *****
70 M1=50
80 M=1000
90 DIM S1$(50)
100 DIM C1$(30)
110 DIM Q1(30)
120 DIM P1(30)
130 N1=1
140 S=0
150 MO=0
160 DIM T1$(6)
170 T1$(1)="BOUGHT"
180 T2$(1)="B"
190 T1$(2)="SOLD"
200 T2$(2)="S"
210 T1$(3)="DOLLAR DVD"
220 T2$(3)="D"
230 T1$(4)="SHARE DVD"
240 T2$(4)="SH"
250 T1$(5)="STK SPLIT"
260 T2$(5)="SS"
270 T1$(6)="****"
280 PRINT
290 PRINT "THE FOLLOWING OPTIONS ARE":"AVAILABLE"
300 PRINT
310 PRINT "1... A LIST OF ALL";TAB(6);"TRANSACTIONS"
320 PRINT "2... A LIST OF ALL CURRENT";TAB(6);"HOLDINGS"
330 PRINT "3... THE PROFIT/LOSS ON A";TAB(6);"GIVEN STOCK"
340 PRINT
350 PRINT "ENTER THE OPTION DESIRED":"( 1, 2, OR 3)"
360 INPUT Q
370 PRINT
380 PRINT
390 IF Q<>3 THEN 490
400 PRINT "ENTER THE STOCK SYMBOL TO":"EVALUATE"
410 INPUT X$
420 PRINT "ENTER THE CURRENT PRICE OF":"THE STOCK"
430 INPUT V
440 PRINT "ENTER THE CURRENT DATE"
450 INPUT D1$
460 PRINT
470 PRINT
480 PRINT #1:" TRANSACTION RECAP -- ";X$;TAB(55);D1$
490 PRINT
500 REM ***** PROCESSING AREA *****
510 FOR I=1 TO M
520 READ T$
530 IF T$="END" THEN 860
540 IF T$="D" THEN 590
550 IF T$="SS" THEN 650
560 IF T$="SD" THEN 590
570 READ C$,S$,E$,D$,P,Q,C
580 GOTO 660
590 READ S$,NO,D$,Q
600 C$=" "
610 E$=" "
620 P=NO
630 C=0
640 GOTO 660
650 READ S$,NO,N1,D$,Q
660 FOR J=1 TO MO
670 IF S$=S1$(J) THEN 740
680 NEXT J
690 MO=MO+1
700 S1$(MO)=S$

```

```

710 M1=M0
720 J=M0
730 GOTO 750
740 M1=J
750 IF Q<>1 THEN 780
760 GOSUB 1400
770 GOTO 850
780 IF Q<>2 THEN 810
790 GOSUB 1610
800 GOTO 850
810 IF Q<>3 THEN 850
820 IF S<>X$ THEN 850
830 GOSUB 1720
840 GOTO 850
850 NEXT I
860 REM ***** END OF MAIN PROCESSING LOOP *****
870 IF Q=1 THEN 1350
880 IF Q<>2 THEN 1100
890 FOR I=1 TO M0
900 PRINT "ENTER THE CURRENT PRICE OF ";C1$(I); " (";S1$(I);)"
910 INPUT P1(I)
920 NEXT I
930 PRINT #1:
940 PRINT #1
950 PRINT #1:TAB(20);"CURRENT STATUS OF HOLDINGS"
960 PRINT #1
970 PRINT #1
980 PRINT #1:"STOCK";TAB(30);"SYMBOL";TAB(40);"QTY HELD";TAB(50);
990 PRINT #1:"PRICE";TAB(60);"VALUE"
1000 PRINT #1:"-----";TAB(30);"-----";TAB(40);"-----";TAB(50);
1010 PRINT #1:"-----";TAB(60);"-----"
1020 FOR I=1 TO M0
1030 PRINT #1:C1$(I);TAB(30);S1$(I);TAB(40);Q1(I);TAB(50);
1040 PRINT #1:P1(I);TAB(60);P1(I)*Q1(I)
1050 TB=TB+(P1(I)*Q1(I))
1060 NEXT I
1070 PRINT #1:TAB(60);"=====
1080 PRINT #1:TAB(52);"TOTAL";TAB(60);TB
1090 GOTO 1270
1100 IF Q<>3 THEN 1350
1110 PRINT #1:
1120 PRINT #1
1130 PRINT #1:TAB(24);"SUMMARY ANALYSIS"
1140 PRINT #1
1150 PRINT #1:TAB(9);"I SHARE COMM DVD I BOOK ";TAB(51);
1160 PRINT #1:"CURRENT I";TAB(62);"CURRENT"
1170 PRINT #1:TAB(2);"SHARES";TAB(9);"I COST PAID RCVD";
1180 PRINT #1:TAB(39);"I TOTAL";TAB(52);"VALUE I";TAB(62);"POSITION"
1190 PRINT #1:"-----I -----I";
1200 PRINT #1:TAB(41);"-----";TAB(51);"----- I";TAB(62);"-----"
1210 PRINT #1:TAB(2);Q9;TAB(12);P9;TAB(24);C9;TAB(33);D9;TAB(40);V9;
1220 PRINT #1:TAB(51);V*Q9;TAB(61);(V*Q9)-V9
1230 IF S9=0 THEN 1270
1240 PRINT #1:TAB(35);"*"
1250 PRINT #1
1260 PRINT #1:"* SHARE DIVIDEND OF ";S9;" SHARES"
1270 PRINT #1
1280 IF Q9=0 THEN 1350
1290 PRINT #1:TAB(28);D1$
1300 PRINT #1:TAB(20);"*****"
1310 PRINT #1:TAB(23);"BOOK VALUE IS ";V9/Q9
1320 PRINT #1:TAB(20);"*****"
1330 PRINT #1:TAB(23);"CURRENT VALUE ";V
1340 PRINT #1:TAB(20);"*****"
1350 PRINT #1
1360 PRINT #1
1370 CLOSE #1
1380 STOP
1390 REM ***** TRANSACTION INTERPRETATION ROUTINE *****
1400 IF I<>1 THEN 1470

```

```

1410 PRINT #1: TAB(28); "TRANSACTION LIST"
1420 PRINT #1
1430 PRINT #1: "TRANS      COMPANY"; TAB(30); "SYB EX    DATE"; TAB(51); "PRICE";
1440 PRINT #1: TAB(60); "QTY"; TAB(66); "COMM"
1450 PRINT #1: "-----" ; TAB(30); "----" ; TAB(51); "-----";
1460 PRINT #1: TAB(60); "----"; TAB(66); "-----"
1470 FOR J=1 TO 5
1480 IF T$(J) THEN 1510
1490 L=J
1500 GOTO 1530
1510 NEXT J
1520 L=6
1530 IF L>2 THEN 1570
1540 PRINT #1: T$(L); TAB(10); C$; TAB(30); S$; TAB(34); E$;
1550 PRINT #1: TAB(37); D$; TAB(50); P; TAB(59); Q; TAB(65); C
1560 GOTO 1600
1570 PRINT #1: T$(6); TAB(9); NO/N1; " "; T$(L); TAB(30); S$; TAB(37); D$;
1580 PRINT #1: TAB(59); Q
1590 N1=1
1600 RETURN
1610 REM ***** ACCUMULATION ROUTINE FOR HOLDINGS *****
1620 C1$(J)=C$
1630 IF T$(J) THEN 1650
1640 Q1(J)=Q1(J)+Q
1650 IF T$(J) THEN 1670
1660 Q1(J)=Q1(J)-Q
1670 IF T$(J) THEN 1690
1680 Q1(J)=Q1(J)+(NO*Q)
1690 IF T$(J) THEN 1710
1700 Q1(J)=(Q1(J)-Q)+(Q*NO/N1)
1710 RETURN
1720 REM ***** ACCUMULATION ROUTINE FOR PROFIT/LOSS ***
1730 IF S=1 THEN 1770
1740 PRINT #1: TAB(23); C$
1750 PRINT #1
1760 S=1
1770 IF T$(J) THEN 1840
1780 PRINT #1: "BOUGHT"; TAB(8); Q; TAB(13); " AT "; P; TAB(25); "-" ; D$;
1790 PRINT #1: TAB(37); " - CHARGES; "; TAB(48); C; TAB(55); " (" ; (Q*P)+C; ")"
1800 Q9=Q9+Q
1810 C9=C9+C
1820 P9=P9+(P*Q)
1830 V9=V9+(Q*P)+C
1840 REM ***** HANDLES SALES *****
1850 IF T$(J) THEN 1920
1860 PRINT #1: "SOLD"; TAB(8); Q; TAB(13); " AT "; P; TAB(25); "-" ; D$;
1870 PRINT #1: TAB(37); " - CHARGES; "; TAB(48); C; TAB(55); " (" ; (Q*P)-C; ")"
1880 Q9=Q9-Q
1890 C9=C9+C
1900 P9=P9-(P*Q)
1910 V9=V9-(Q*P)+C
1920 REM ***** HANDLES DIVIDENDS *****
1930 IF T$(J) THEN 1980
1940 V9=V9-(Q*NO)
1950 D9=D9+(NO*Q)
1960 PRINT #1: "DIVIDENDS *** OF "; NO; TAB(25); "-" ; D$; TAB(38); Q; TAB(44);
1970 PRINT #1: "SHARES"; TAB(55); " (" ; (Q*NO); ")"
1980 REM ***** HANDLES SHARE DIVIDENDS *****
1990 IF T$(J) THEN 2040
2000 S9=S9+(NO*Q)
2010 Q9=Q9+(NO*Q)
2020 PRINT #1: "SHARE DIV *** "; NO; TAB(25); "-" ; D$; TAB(38); Q; TAB(44);
2030 PRINT #1: "SHARES DVD=" ; NO*Q; " SHARES"
2040 REM ***** HANDLES STOCK SPLITS *****
2050 IF T$(J) THEN 2090
2060 PRINT #1: "STK SPLIT *** "; NO; "/" ; N1; TAB(25); "-" ; D$; TAB(38); Q; TAB(44);
2070 PRINT #1: "SHARES"
2080 Q9=(Q9-Q)+(Q*NO/N1)
2090 REM ***** TOTAL PRINTING AREA *****
2100 RETURN

```

2110 *****DATA ENTRIES FOLLOW *****
 2120 DATA B,ABC CORP.,ABC,NY,JUN 5 1979,12.00,100,12.15
 2130 DATA B,XYZ CO.,XYZ,A,JUN 6 1979,100.22,200,35.33
 2140 DATA S,XYZ CO.,XYZ,A,OCT 7 1979,88.88,100,21.11
 2150 DATA D,XYZ,3.05,NOV 1979,100
 2160 DATA SS,XYZ,3,1,DEC 31 1979,100
 2170 DATA SD,XYZ,.05,JAN 1 1980,100
 2180 DATA B,XYZ CO.,XYZ,A,JAN 31 1980,75.00,100,19.99
 2190 DATA S,ABC CORP.,ABC,NY,JAN 28 1980,14.00,50,4.55
 2200 DATA END

>RUN

THE FOLLOWING OPTIONS ARE
 AVAILABLE

- 1... A LIST OF ALL
 TRANSACTIONS
- 2... A LIST OF ALL CURRENT
 HOLDINGS
- 3... THE PROFIT/LOSS ON A
 GIVEN STOCK

ENTER THE OPTION DESIRED
 (1, 2, OR 3)
 ? 1

TRANSACTION LIST

TRANS	COMPANY	SYB	EX	DATE	PRICE	QTY	COMM
BOUGHT	ABC CORP.	ABC	NY	JUN 5 1979	12	100	12.15
BOUGHT	XYZ CO.	XYZ	A	JUN 6 1979	100.22	200	35.33
SOLD	XYZ CO.	XYZ	A	OCT 7 1979	88.88	100	21.11
****	3.05 DOLLAR DVD	XYZ		NOV 1979		100	
****	3 STK SPLIT	XYZ		DEC 31 1979		100	
****	.05 ****	XYZ		JAN 1 1980		100	
BOUGHT	XYZ CO.	XYZ	A	JAN 31 1980	75	100	19.99
SOLD	ABC CORP.	ABC	NY	JAN 28 1980	14	50	4.55

>RUN

THE FOLLOWING OPTIONS ARE
 AVAILABLE

- 1... A LIST OF ALL
 TRANSACTIONS
- 2... A LIST OF ALL CURRENT
 HOLDINGS
- 3... THE PROFIT/LOSS ON A
 GIVEN STOCK

ENTER THE OPTION DESIRED
 (1, 2, OR 3)
 ? 2

ENTER THE CURRENT PRICE OF
 ABC CORP. (ABC)
 ? 98.85
 ENTER THE CURRENT PRICE OF
 XYZ CO. (XYZ)
 ? 67.89

CURRENT STATUS OF HOLDINGS

STOCK	SYMBOL	QTY HELD	PRICE	VALUE
ABC CORP.	ABC	50	98.85	4942.5
XYZ CO.	XYZ	405	67.89	27495.45
			TOTAL	32437.95

>RUN

THE FOLLOWING OPTIONS ARE AVAILABLE

- 1... A LIST OF ALL TRANSACTIONS
- 2... A LIST OF ALL CURRENT HOLDINGS
- 3... THE PROFIT/LOSS ON A GIVEN STOCK

ENTER THE OPTION DESIRED
(1, 2, OR 3)
? 3

ENTER THE STOCK SYMBOL TO EVALUATE
? XYZ
ENTER THE CURRENT PRICE OF THE STOCK
? 55.25
ENTER THE CURRENT DATE
? JUN 19 1980

TRANSACTION RECAP -- XYZ JUN 19 1980
XYZ CO.

```
BOUGHT 200 AT 100.22 -JUN 6 1979 - CHARGES: 35.33 ( 20079.33 )
SOLD 100 AT 88.88 -OCT 7 1979 - CHARGES: 21.11 ( 8866.89 )
DIVIDENDS *** OF 3.05 -NOV 1979 100 SHARES ( 305 )
STK SPLIT *** 3 / 1 -DEC 31 1979 100 SHARES
SHARE DIV *** .05 -JAN 1 1980 100 SHARES DVD= 5 SHARES
BOUGHT 100 AT 75 -JAN 31 1980 - CHARGES: 19.99 ( 7519.99 )
```

SUMMARY ANALYSIS

SHARES	I SHARE COST	COMM PAID	DVD I RCVD	I BOOK TOTAL	CURRENT VALUE	I CURRENT POSITION
405	18656	76.43	305	18427.43	22376.25	3948.82

* SHARE DIVIDEND OF 5 SHARES

JUN 19 1980

BOOK VALUE IS 45.49982716

CURRENT VALUE 55.25

BREAK IN 1340

MAJOR SYMBOL TABLE - STOCKS

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	S1\$()	ARRAY OF STOCK SYMBOLS	I
I	C1\$()	ARRAY OF COMPANY NAMES	I
I	Q1()	ARRAY OF QTY HELD	I
I	P1()	ARRAY OF PRICES PAID	I
I	T1\$()	MASTER CATEGORY CODE ARRAY	I
I	T2\$()	MASTER CATEGORY DESCRIPTION ARRAY	I
I	O	OPTION NUMBER	I
I	X\$	STOCK SYMBOL TO EVALUATE	I
I	V	CURRENT PRICE OF STOCK	I
I	D1\$	CURRENT DATE	I
I	T\$	TRANSACTION CATEGORY CODE	I
I	C\$	TRANSACTION COMPANY NAME	I
I	S\$	TRANSACTION STOCK SYMBOL	I
I	E\$	TRANSACTION EXCHANGE	I
I	D\$	TRANSACTION DATE	I
I	P	TRANSACTION PRICE	I
I	Q	TRANSACTION QTY	I
I	C	TRANSACTION COMMISSION COST	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINE	I
I	GOSUB	BRANCHES AND RETURNS	I
I	DIM	SINGLE DIMENSION ARRAY	I

2

Automobile Related Programs

Auto Maintenance

Gasoline Use Computation—Basic Version

Gasoline Use Computation—Extended Version

Automobile Comparisons

Trip Planning—Basic Version

Trip Planning—Extended Version

AUTO MAINTENANCE

Description

Automobiles are increasing in price every day. This program will assist you in insuring that recommended maintenance (service) actions are taken to protect your investment. In addition, it provides an ideal record for showing to prospective buyers.

Functions of the Program

The program reads the data items that reflect the manufacturer's recommended maintenance schedules and the service accomplished by you. The basic schedule items are extended by the program (based upon mileage) through the current mileage on the vehicle. Maintenance schedules and records are printed, as requested.

Instructions for Use

Data entries of all recommended service items in the automobile owner's manual must be entered into the program prior to running. Service performed should be entered as it is accomplished.

Data Entry

All data is entered using DATA statements.

Data Formats

Three formats are required:

1. The first item is the automobile's purchase date:
Month, Year
2. Basic manufacturer recommended service schedules are then added in the following form:
Service code, Description, Frequency in miles,
Frequency in months
3. Service accomplished is entered in the following form:
Service code, Mileage, Month, Year

Note that an END card is required to separate the basic service requirements from the items accomplished.

Output Description

See example provided. Three outputs are available:

1. A list of the basic maintenance requirements and their frequency.
2. A detailed list of maintenance accomplished.
3. A schedule of the next scheduled accomplishment of each of the service requirements.


```

10 CALL CLEAR
20 REM AUTOMOBILE MAINTENANCE RECORD-BASIC
30 REM ***** DATA INITIALIZATION *****
40 MO=25
50 IO=1000
60 DIM M(25)
70 DIM I$(25)
80 DIM C$(25)
90 DIM L1(25)
100 DIM L1$(25)
110 DIM DO$(12)
120 FOR I=1 TO 12
130 READ DO$(I)
140 NEXT I
150 READ T1$,Y1
160 DIM T(25)
170 REM ***** MAIN PROCESSING AREA *****
180 REM ***** READ INITIAL SCHEDULES
190 FOR I=1 TO MO
200 READ C$(I)
210 IF C$(I)="END" THEN 240
220 READ I$(I),M(I),T(I)
230 NEXT I
240 MO=I-1
250 PRINT "WOULD YOU LIKE TO SEE THE";"BASIC SCHEDULE (Y OR N)?"
260 INPUT A$
270 IF A$<>"Y" THEN 330
280 PRINT " ITEM";TAB(14);"MILES";TAB(21);"MONTHS"
290 PRINT "-----"
300 FOR I=1 TO MO
310 PRINT I$(I);TAB(13);M(I);TAB(21);T(I)
320 NEXT I
330 REM ***** PRINTS MAINTENANCE RECORD *****
340 PRINT
350 PRINT
360 PRINT "ENTER CURRENT MILEAGE"
370 INPUT M1
380 PRINT "SHALL I PRINT THE";"MAINTENANCE RECORD (Y OR N)?"
390 INPUT A$
400 PRINT "ALIGN PAPER FOR PRINTING"
410 INPUT A1$
420 IF A$<>"Y" THEN 500
430 PRINT "*****"
440 PRINT
450 PRINT "RECORD OF SCHEDULE";"MAINTENANCE ACCOMPLISHED"
460 PRINT
470 PRINT "ITEM";TAB(10);"AT MILES";TAB(20);" DATE"
480 PRINT "-----"
490 REM
500 K=1
510 READ C9$
520 IF C9$="END" THEN 690
530 READ M9,M9$,Y9
540 FOR I=1 TO MO
550 IF C9$<>C$(I) THEN 600
560 IF L1(I)>=M9 THEN 590
570 L1(I)=M9
580 L1$(I)=M9$
590 GOTO 610
600 NEXT I
610 IF A$<>"Y" THEN 670
620 FOR I=1 TO MO
630 IF C9$=C$(I) THEN 660
640 NEXT I
650 I$(I)=" "
660 PRINT I$(I);TAB(10);M9;TAB(20);M9$;Y9
670 K=K+1
680 IF K<=10 THEN 510

```

```

690 PRINT
700 PRINT
710 PRINT "*****"
720 PRINT
730 PRINT "SCHEDULED MAINTENANCE"; "BASED UPON MILEAGE"
740 PRINT
750 PRINT " ITEM"; TAB(8); " FREQ"; TAB(16); "LAST"; TAB(21); " SCHED"
760 PRINT "-----"
770 REM
780 FOR J=1 TO M0
790 I=L1(J)+M(J)
800 IF I>M1 THEN B20
810 X$="*"
820 PRINT I$(J); TAB(8); M(J); TAB(15); L1(J); TAB(22); I; X$
830 X$=" "
840 NEXT J
850 PRINT
860 PRINT "CURRENT MILEAGE IS "; M1
870 PRINT
880 PRINT "*****"
890 REM ***** PROGRAM TERMINATION POINT *****
900 PRINT
910 PRINT
920 STOP
930 REM ***** DATA FOR INITIALIZATION *****
940 DATA JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC
950 REM ***** DATA ENTRY FOLLOWS *****
960 DATA JUN, 1978
970 DATA OILF, OIL FIL, 12000, 12
980 DATA AIRF, AIR FIL, 12000, 12
990 REM
1000 DATA LUBE, LUB, 12000, 12
1010 DATA CHKTW, TIRE WEAR, 3000, 3
1020 DATA CHKAL, CK ALIG, 4000, 4
1030 DATA END
1040 DATA OILF, 13000, JUN, 1979
1050 DATA LUBE, 11000, MAY, 1979
1060 DATA END

```

```

> RUN
? WOULD YOU LIKE TO SEE THE
? BASIC SCHEDULE (Y OR N)?
?
? ITEM          MILES    MONTHS
?-----
? OIL FIL      12000    12
? AIR FIL     12000    12
? LUB         12000    12
? TIRE WEAR   3000     3
? CK ALIG     4000     4
?
? ENTER CURRENT MILEAGE
? 13700
? SHALL I PRINT THE
? MAINTENANCE RECORD (Y OR N)?
?
? ALIGN PAPER FOR PRINTING
?

```

RECORD OF SCHEDULE
MAINTENANCE ACCOMPLISHED

ITEM	AT MILES	DATE
OIL FIL	13000	JUN 1979
LUB	11000	MAY 1979

```

*****
SCHEDULED MAINTENANCE
BASED UPON MILEAGE
  ITEM   FREQ   LAST   SCHED
  ---   ---   ---   ---
OIL FIL 12000   13000   25000
AIR FIL 12000   0       12000
*
LUB      12000   11000   23000
TIRE WEAR
CK ALIG 3000    0       3000 *
        4000    0       4000 *
CURRENT MILEAGE IS 13700
*****

```

MAJOR SYMBOL TABLE - AUTO MAINTENANCE

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I N0    .. NUMBER OF MASTER SERVICE ITEMS         I
I I0    .. MAXIMUM NUMBER OF DATA READS          I
I M( )  .. MASTER MILEAGE ARRAY                   I
I I$( ) .. MASTER SERVICE RQMNTS ARRAY           I
I C$( ) .. MASTER CODE FOR SERVICE ITEMS ARRAY   I
I L1( ) .. LATEST SERVICE -MILEAGE ARRAY         I
I L1$( ).. LATEST SERVICE -MONTH ARRAY          I
I D0$( ).. MONTH NAME ARRAY                      I
I T( )  .. MASTER TIME ARRAY                    I
I T1$   .. PURCHASE MONTH                        I
I Y1    .. PURCHASE YEAR                         I
I M1    .. CURRENT MILEAGE                       I
I C9$   .. TRANSACTION CODE IN                   I
I M9    .. TRANSACTION MILEAGE IN                I
I M9$   .. TRANSACTION MONTH IN                 I
I Y9    .. TRANSACTION YEAR IN                   I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I TAB   .. FORMATS PRINT LINES                   I
I DIM   .. SINGLE DIMENSION ARRAYS              I
I-----I

```

GASOLINE USE COMPUTATION – BASIC VERSION

Description

The rising cost of gasoline makes this program more useful each day since it allows you to compute the current average miles per gallon for your automobile(s).

Functions of the Program

The program requests from you the initial mileage for the period and the date that the recording period started. Following this, the gasoline used during the period is entered along with the mileage at the end of the period. The program then computes miles driven, total gasoline used, and the average miles per gallon for the period.

Instructions for Use

Record your mileage and the gasoline used prior to running the program. Supply this information in response to the program's request.

Data Entry

All data is entered in response to the program's request, through the keyboard.

Output Description

See example provided.

Suggested Enhancements

See the extended version for historical recordkeeping functions.

```
10 CALL CLEAR
20 REM GASOLINE MILEAGE ANALYSIS
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "ENTER THE INITIAL MILEAGE, "; "DATE OF RECORDING"
60 INPUT M0, D0$
70 PRINT "ENTER THE GASOLINE USED: "; "(0 WHEN FINISHED)"
80 FOR I=1 TO M
90 G=0
100 INPUT B
110 IF G=0 THEN 140
120 G1=G1+B
130 NEXT I
140 PRINT "ENTER ENDING MILEAGE, DATE"
150 INPUT M9, D9$
160 REM ***** PROCESSING AREA *****
170 M=M9-M0
180 C=M/G1
190 PRINT
200 PRINT
210 PRINT "*****"
220 PRINT "FOR THE PERIOD "; D0$; "-" ; D9$
230 PRINT " MILES DRIVEN: "; M
240 PRINT " GASOLINE USED: "; G1
250 PRINT " AVG MILES/GALLON: "; C
260 PRINT "*****"
```


GASOLINE USE COMPUTATION – EXTENDED VERSION

Description

This program extends the basic version shown previously by adding a historical record of gas mileage and consumption.

Functions of the Program

See the basic version. This program adds to these functions the capability to print data items from past periods. After each analysis, the format to be supplied for historical use is printed for you.

Instructions for Use

Record your mileage and gas consumption prior to running the program. After processing, enter the information as DATA statements in accordance with the instructions given.

Data Entry

Current information is entered in response to program request. Historical information is entered using DATA statements.

Data Formats

The format of the historical data is as follows:

Starting month-day-year, Ending month-day-year,
Ending mileage, Miles driven during period, Gasoline used

Output Description

See example provided.

```
10 CALL CLEAR
20 REM GASOLINE USE COMPUTATION
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "DO YOU WISH TO ANALYZE PAST";"(P), OR CURRENT (C) DATA";
60 INPUT A$
70 IF A$="P" THEN 390
80 PRINT "ENTER THE INITIAL MILEAGE,";"DATE OF RECORDING";
90 INPUT M0,D0$
100 PRINT "ENTER THE GASOLINE USED";"(0 WHEN FINISHED)"
110 FOR I=1 TO M
120 G=0
130 INPUT G
140 IF G=0 THEN 170
150 G1=G1+G
160 NEXT I
170 PRINT "ENTER ENDING MILEAGE, DATE"
180 INPUT M9,D9$
190 REM ***** PROCESSING AREA *****
200 REM ***** ANALYSIS OF CURRENT PERFORMANCE *****
210 M=M9-M0
220 C=M/G1
230 PRINT
240 PRINT
250 PRINT "*****"
```


ENTER SEP 1, SEP 15, 500, 50
 BEFORE THE LAST DATA CARD STATEMENT
 WOULD YOU LIKE TO SEE PAST
 DATA NOW (Y OR N)? Y

PRINT LINES	DRIVE CYCLES	MILES	GALLONS	AVG MPG
TO	1000	100	10	
TO	1500	200	7.5	
TO	2000	300	6.66	
TOTALS	4500	600	7.5	

MAJOR SYMBOL TABLE - GASOLINE USE - EXTENDED

I	NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	M0	.. INITIAL MILEAGE	I
I	D0*	.. DATE OF INITIAL MILEAGE	I
I	G	.. GASOLINE USED	I
I	G1	.. TOTAL GASOLINE USED	I
I	M9	.. ENDING MILEAGE	I
I	D9*	.. DATE OF ENDING MILEAGE	I
I	M	.. MILES DRIVEN	I
I	C	.. AVERAGE MILES/GALLON	I
I	M5	.. OVERALL MILES DRIVEN	I
I	G5	.. OVERALL GASOLINE USED	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

AUTOMOBILE COMPARISONS

Description

This program has been designed to assist the automobile shopping family in the evaluation of the costs of owning the various models being considered. The selection can then be made with a better idea of what the total costs of the model really are.

Functions of the Program

The program compares the specified number of automobiles based upon several vital costs of automobile ownership. These costs are computed for the time period requested. The costs analyzed include: gasoline, maintenance, depreciation, insurance, and other costs. Each cost computation is separated for ease in adding other cost categories.

Instructions for Use

Run the program and enter the cost data in response to the program's requests.

Data Entry

Data is entered through the keyboard, in response to the program's request.

Output Description

See example provided. Each automobile is processed and printed separately. Annual ownership costs are printed in detail, and totals are provided for the number of years specified.

```
10 CALL CLEAR
20 REM AUTOMOBILE COMPARISON PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 DIM C(10)
50 DIM N$(10)
60 DIM G(6)
70 DIM D2(6)
80 DIM M(10,6)
90 DIM V(10,6)
100 DIM P(10,6)
110 DIM O(10,6)
120 DIM G1(6)
130 DIM T(6)
140 PRINT
150 PRINT "HOW MANY AUTOMOBILES ARE WE": "COMPARING"
160 INPUT N
170 PRINT "ENTER THE NUMBER OF YEARS": "FOR THE ANALYSIS"
180 INPUT Y
190 PRINT "ENTER THE AVERAGE ANNUAL": "MILES IT IS TO BE DRIVEN"
200 INPUT D
210 PRINT "ENTER THE EXPECTED": "COST/GALLON OF GAS"
220 INPUT CO
230 PRINT
240 FOR I=1 TO N
250 PRINT
```

```

260 PRINT "ENTER FOR AUTO NUMBER";I
270 PRINT "NAME:";
280 INPUT N$(I)
290 PRINT "INITIAL COST (INCLUDE SALES":"TAX, ETC.)"
300 INPUT C(I)
310 PRINT "MILES PER GALLON ESTIMATE"
320 INPUT G(I)
330 FOR J=1 TO Y
340 PRINT
350 PRINT "ENTER FOR YEAR";J
360 PRINT "MAINTENANCE COST"
370 INPUT M(I,J)
380 PRINT "APPROX VALUE AT YEAR END"
390 INPUT V(I,J)
400 PRINT "INSURANCE COST"
410 INPUT P(I,J)
420 PRINT "ENTER OTHER OPERATING COSTS"
430 INPUT O(I,J)
440 NEXT J
450 NEXT I
460 PRINT
470 PRINT "*****"
480 PRINT TAB(5);"ANALYSIS RESULTS"
490 PRINT "*****"
500 PRINT
510 REM ***** PRINT OF RESULTS *****
520 FOR I=1 TO N
530 PRINT "AUTO ";N$(I);TAB(15);"PRICE:";C(I);"MPG:";G(I)
540 PRINT
550 PRINT "ANNUAL OPERATING COSTS"
560 PRINT "ITEM";
570 FOR K=1 TO Y
580 PRINT TAB(K*10);" YEAR";K;
590 NEXT K
600 PRINT
610 FOR K=1 TO Y+1
620 PRINT TAB((K-1)*10);"-----";
630 NEXT K
640 PRINT
650 REM *****
660 PRINT "GAS $";
670 FOR K=1 TO Y
680 G1(K)=D/G(I)*CO
690 PRINT TAB(K*10);G1(K);
700 NEXT K
710 PRINT
720 REM *****
730 PRINT "MAINT $";
740 FOR K=1 TO Y
750 PRINT TAB(K*10);M(I,K);
760 NEXT K
770 PRINT
780 REM *****
790 PRINT "DEPREC $";
800 FOR K=1 TO Y
810 IF K<>1 THEN B40
820 D2(K)=C(I)-V(I,K)
830 GOTO B50
840 D2(K)=V(I,K-1)-V(I,K)
850 PRINT TAB(K*10);D2(K);
860 NEXT K
870 PRINT
880 REM *****
890 PRINT "INSUR $";
900 FOR K=1 TO Y
910 PRINT TAB(K*10);P(I,K);
920 NEXT K
930 PRINT
940 REM *****
950 PRINT "OTHER $";

```

```

960 FOR K=1 TO Y
970 PRINT TAB(K*10);O(I,K);
980 NEXT K
990 PRINT
1000 FOR K=1 TO Y
1010 PRINT TAB(K*10);"-----";
1020 NEXT K
1030 PRINT
1040 PRINT "TOTAL";
1050 FOR K=1 TO Y
1060 T(K)=M(I,K)+D2(K)+P(I,K)+B1(K)+O(I,K)
1070 X=X+T(K)
1080 PRINT TAB(K*10);T(K);
1090 NEXT K
1100 PRINT
1110 PRINT
1120 PRINT "COST/MILE";
1130 FOR K=1 TO Y
1140 PRINT TAB(K*10);T(K)/D;
1150 NEXT K
1160 PRINT
1170 PRINT
1180 PRINT "OVERALL MILES DRIVEN: ";Y*D;"COST/MILE: ";X/(Y*D)
1190 X=0
1200 PRINT "*****"
1210 PRINT
1220 NEXT I
1230 REM ***** PROGRAM TERMINATION POINT *****
1240 PRINT
1250 PRINT
1260 STOP

```

>RUN

```

HOW MANY AUTOMOBILES ARE WE
COMPARING
? 1
ENTER THE NUMBER OF YEARS
FOR THE ANALYSIS
? 2
ENTER THE AVERAGE ANNUAL
MILES IT IS TO BE DRIVEN
? 10000
ENTER THE EXPECTED
COST/GALLON OF GAS
? .55

```

```

ENTER FOR AUTO NUMBER 1:
NAME:? BRAND X
INITIAL COST (INCLUDE SALES
TAX, ETC.)
? 5000
MILES PER GALLON ESTIMATE
? 10

```

```

ENTER FOR YEAR 1
MAINTENANCE COST
? 100
APPROX VALUE AT YEAR END
? 3000
INSURANCE COST
? 100
ENTER OTHER OPERATING COSTS
? 100

```

ENTER FOR YEAR 2
 MAINTENANCE COST
 ? 200
 APPROX VALUE AT YEAR END
 ? 2000
 INSURANCE COST
 ? 100
 ENTER OTHER OPERATING COSTS
 ? 100

 ANALYSIS RESULTS

AUTO BRAND X PRICE: 5000
 MPG: 10

ANNUAL OPERATING COSTS		
ITEM	YEAR 1	YEAR 2
GAS \$	550	550
MAINT \$	100	200
DEPREC \$	2000	1000
INSUR \$	100	100
OTHER \$	100	100
TOTAL	2850	1950

COST/MILE .285 .195

OVERALL MILES DRIVEN: 20000
 COST/MILE: .24

MAJOR SYMBOL TABLE - CAR COMPARISONS

I	NAME	.. DESCRIPTION	I
I	C()	.. INITIAL COST ARRAY	I
I	G()	.. MILES/GALLON ARRAY	I
I	D2()	.. DEPRECIATION ARRAY	I
I	M()	.. MAINTENANCE COSTS	I
I	V()	.. VALUES AT YEAR END ARRAY	I
I	N\$()	.. NAMES OF AUTOS	I
I	P()	.. INSURANCE COSTS	I
I	O()	.. OTHER COSTS	I
I	G1()	.. GASOLINE COSTS YEARLY	I
I	T()	.. TOTAL COSTS PER YEAR	I
I	N	.. NUMBER OF AUTOS TO COMPARE	I
I	Y	.. NUMBER OF YEARS FOR THE COMPARISON	I
I	D	.. AVERAGE ANNUAL MILES DRIVEN	I
I	CO	.. EXPECTED COST PER GALLON	I
I	T	.. TOTAL COSTS	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. 2 DIMENSION ARRAYS	I

TRIP PLANNING – BASIC VERSION

Description

This program offers assistance in planning your vacations and other automobile travel. Daily budgets and total trip costs are computed for your use.

Functions of the Program

The program accepts keyboard inputs concerning the trip and produces a table showing the projected itinerary and costs for each type of expense incurred. Totals for each day are provided in addition to total trip costs.

Instructions for Use

Run the program and answer the questions asked by the program.

Data Entry

All data is entered in response to the program's requests.

Output Description

See example provided. A table of costs is produced that details the itinerary and produces totals for all costs.

```
10 CALL CLEAR
20 REM TRIP ANALYSIS-BASIC
30 REM ***** DATA INITIALIZATION *****
40 DIM D$(15)
50 DIM M(15)
60 DIM F(15)
70 DIM L(15)
80 DIM T(15)
90 PRINT "ENTER THE NAME FOR THE TRIP"
100 INPUT N$
110 PRINT "ENTER THE MILES/GALLON YOU": "EXPECT TO ACHIEVE"
120 INPUT C
130 PRINT "ENTER THE AVERAGE COST PER": "GALLON YOU EXPECT TO PAY"
140 INPUT G
150 PRINT "ENTER THE NUMBER OF DAYS IT": "WILL TAKE YOU"
160 INPUT D1
170 FOR J=1 TO D1
180 PRINT "FOR DAY";J
190 PRINT "ENTER STOPPING POINT, MILES": "TRAVELED"
200 INPUT D$(J),M(J)
210 PRINT "ENTER YOUR COST FOR MEALS": "AND LODGING. I.E., 75,25"
220 INPUT F(J),L(J)
230 REM ***** PRINT OF RESULTS *****
240 NEXT J
250 PRINT
260 PRINT
270 PRINT "*****"
280 PRINT "****RESULTS OF ANALYSIS****"
290 PRINT "*****"
300 PRINT
310 PRINT "TRIP NAME: ";N$
320 PRINT
330 PRINT TAB(16); "FOOD&"; TAB(29); "DAY"; TAB(33); "STOP"; TAB(39); "GAS"; TAB(44)
```

```

; "LODGE"; TAB(51); "TOTAL"
340 PRINT "*****"
350 FOR J=1 TO D1
360 X=M(J)/C*B
361 X=INT(X*100)/100
370 Y=F(J)+L(J)
380 PRINT J; TAB(4); D*(J); TAB(10); X; TAB(16); Y;
390 T(J)=X+Y
420 X1=X1+X
430 M1=M1+M(J)
440 F1=F1+F(J)
450 L1=L1+L(J)
460 Y1=L1+F1
470 PRINT TAB(22); T(J)
480 T1=T1+T(J)
490 T(J)=0
500 PRINT
510 NEXT J
520 PRINT "*****"
530 PRINT TAB(3); "TOTAL"; TAB(10); X1; TAB(16); Y1; TAB(22); T1;
540 PRINT
550 REM ***** PROGRAM TERMINATION POINT *****
560 END

```

```

ENT THE NAME FOR THE TRIP
NNT THE MILES/GALLON YOU
XNT THE AVERAGE COST PER
NNT THE NUMBER OF DAYS IT
NNT THE TIPPING POINT, MILES
NNT COST FOR MEALS
NNT THE TIPPING POINT, MILES
NNT COST FOR MEALS
45,20

```

```

*****
*****RESULTS OF ANALYSIS*****
*****
TRIP NAME: PROVIDENCE

DAY STOP GAS FOOD& LODGE TOTAL
*** ** ** ** **
1 BOS. 62.5 90 152.5
2 PROV. 9.37 65 74.37
*****
TOTAL 71.87 155 226.87

```

MAJOR SYMBOL TABLE - TRIP PLANNING - BASIC

I	NAME	DESCRIPTION	I
I	D\$()	.. ARRAY OF STOP POINTS	I
I	M()	.. ARRAY OF MILES TRAVELED	I
I	F()	.. ARRAY OF FOOD COSTS	I
I	L()	.. ARRAY OF LODGING COSTS	I
I	O()	.. ARRAY OF OTHER COSTS	I
I	T()	.. ARRAY OF TOTAL DAILY COSTS	I
I	N\$	.. NAME OF TRIP	I
I	C	.. EXPECTED MILES PER GALLON	I
I	G	.. AVERAGE COST PER GALLON	I
I	D1	.. NUMBER OF DAYS FOR TRIP	I
I	X	.. GASOLINE COSTS	I
I	X1	.. TOTAL GASOLINE COSTS	I
I	M1	.. TOTAL MILES	I
I	F1	.. TOTAL FOOD COSTS	I
I	L1	.. TOTAL LODGING COSTS	I
I	O1	.. TOTAL OTHER COSTS	I
I	T1	.. TOTAL COSTS	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

TRIP PLANNING – EXTENDED VERSION

Description

This program offers assistance in comparing various travel plans and routes.

Functions of the Program

The program accepts keyboard inputs of trip information and produces a table showing the itinerary and the projected costs for that trip/route. Totals for each day are produced, along with overall totals for the trip.

Instructions for Use

Run the program and answer the questions asked of you.

Data Entry

All data is entered through the keyboard in response to the program's requests.

Output Description

See example provided. The results for each route are printed with daily and trip totals provided.

Comments

The maximum number of routes is currently set at five, and the maximum number of days for each is set at fifteen. These are easily changed by modifying lines 40-140.

```
10 CALL CLEAR
20 REM TRIP ANALYSIS PROGRAM - EXTENDED
30 REM ***** DATA INITIALIZATION *****
40 DIM C(5)
50 DIM G(5)
60 DIM D(5)
70 DIM D1(5)
80 DIM D$(5,15)
90 DIM M(5,15)
100 DIM F(5,15)
110 DIM L(5,15)
120 DIM O(5,15)
130 DIM N$(5)
140 DIM T(15)
150 PRINT "ENTER THE NUMBER OF ROUTES": "THAT YOU ARE CONSIDERING"
160 INPUT R
170 FOR I=1 TO R
180 PRINT "FOR ROUTE #"; I
190 PRINT "ENTER THE NAME OF THIS ROUTE"
200 INPUT N$(I)
210 PRINT "ENTER THE MILES/GALLON YOU": "EXPECT TO ACHIEVE ON ROUTE"; I
220 INPUT C(I)
230 PRINT "ENTER THE AVERAGE COST PER": "GALLON YOU EXPECT TO PAY"
240 INPUT G(I)
250 PRINT "ENTER THE NUMBER OF DAYS IT": "WILL TAKE YOU"
260 INPUT D1(I)
```



```

270 FOR J=1 TO D1(I)
280 PRINT "FOR DAY";J
290 PRINT "ENTER YOUR STOPPING": "DESTINATION"
300 INPUT D$(I,J)
310 PRINT "ENTER YOUR MILES TRAVELED"
320 INPUT M(I,J)
330 PRINT "ENTER YOUR COST FOR MEALS"
340 INPUT F(I,J)
350 PRINT "ENTER YOUR COST OF LODGING"
360 INPUT L(I,J)
370 PRINT "ENTER ANY OTHER COSTS"
380 INPUT O(I,J)
390 NEXT J
400 NEXT I
410 REM ***** PRINT OF RESULTS *****
420 PRINT
430 PRINT
440 PRINT "*****"
450 PRINT "      RESULTS OF ANALYSIS      "
460 PRINT "*****"
470 PRINT
480 FOR I=1 TO R
490 PRINT "RESULTS OF ROUTE ";I;N$(I)
500 PRINT "  PRESS ANY KEY TO CONT.  "
510 INPUT HOLD$
520 D(I)=D1(I)
530 L1=0
540 IF D1(I)<=6 THEN 580
550 L1=L1+1
560 D1(I)=D1(I)-6
570 GOTO 540
580 FOR Z=0 TO L1
590 IF L1=0 THEN 630
600 D(I)=6
610 IF L1<>Z THEN 630
620 D(I)=D1(I)
630 FOR K1=1 TO D(I)
640 K=K1+Z*6
650 PRINT TAB(K1*10+1); "DAY";K;
660 NEXT K1
670 PRINT
680 FOR K1=1 TO D(I)
690 PRINT TAB(K1*10); "-----";
700 NEXT K1
710 PRINT
720 PRINT "STOP AT";;
730 FOR J1=1 TO D(I)
740 J=J1+Z*6
750 PRINT TAB(J1*10);D$(I,J);
760 NEXT J1
770 PRINT
780 PRINT "MILEAGE";
790 FOR J1=1 TO D(I)
800 J=J1+Z*6
810 PRINT TAB(J1*10);M(I,J);
820 NEXT J1
830 PRINT
840 FOR J1=1 TO D(I)
850 PRINT TAB(J1*10); "-----";
860 NEXT J1
870 PRINT
880 PRINT "GAS $";
890 FOR J1=1 TO D(I)
900 J=J1+Z*6
910 X=M(I,J)/C(I)*G(I)
920 PRINT TAB(J1*10);X;
930 T(J)=T(J)+X
940 NEXT J1
950 PRINT
960 PRINT "MEALS $";

```

```

970 FOR J1=1 TO D(I)
980 J=J1+Z*6
990 PRINT TAB(J1*10);F(I,J);
1000 T(J)=T(J)+F(I,J)
1010 NEXT J1
1020 PRINT
1030 PRINT "LODGING $";
1040 FOR J1=1 TO D(I)
1050 J=J1+Z*6
1060 PRINT TAB(J1*10);L(I,J);
1070 T(J)=T(J)+L(I,J)
1080 NEXT J1
1090 PRINT
1100 PRINT "OTHER $";
1110 FOR J1=1 TO D(I)
1120 J=J1+Z*6
1130 PRINT TAB(J1*10);O(I,J);
1140 T(J)=T(J)+O(I,J)
1150 NEXT J1
1160 PRINT
1170 FOR J1=1 TO D(I)
1180 PRINT TAB(J1*10);"-----";
1190 NEXT J1
1200 PRINT
1210 PRINT "TOTAL $";
1220 FOR J1=1 TO D(I)
1230 J=J1+Z*6
1240 PRINT TAB(J1*10);T(J);
1250 TO=TO+T(J)
1260 T(J)=0
1270 NEXT J1
1280 PRINT
1290 PRINT
1300 NEXT Z
1310 PRINT
1320 PRINT "TOTAL COST FOR THIS ROUTE": "IS: ";TO
1330 TO=0
1340 PRINT "*****"
1350 PRINT
1360 NEXT I
1370 REM ***** PROGRAM TERMINATION POINT *****
1380 PRINT
1390 PRINT
1400 STOP

```

```

>RUN
ENTER THE NUMBER OF ROUTES
THAT YOU ARE CONSIDERING
? 2
FOR ROUTE # 1
ENTER THE NAME OF THIS ROUTE
? NORTHERN
ENTER THE MILES/GALLON YOU
EXPECT TO ACHIEVE ON ROUTE 1
? 10
ENTER THE AVERAGE COST PER
GALLON YOU EXPECT TO PAY
? 1.25
ENTER THE NUMBER OF DAYS IT
WILL TAKE YOU
? 1
FOR DAY 1
ENTER YOUR STOPPING
DESTINATION
? CITY Y
ENTER YOUR MILES TRAVELED
? 500
ENTER YOUR COST FOR MEALS
? 50

```

ENTER YOUR COST OF LODGING
 ? 0
 ENTER ANY OTHER COSTS
 ? 10
 FOR ROUTE # 2
 ENTER THE NAME OF THIS ROUTE
 ? SOUTHERN
 ENTER THE MILES/GALLON YOU
 EXPECT TO ACHIEVE ON ROUTE 2
 ? 11
 ENTER THE AVERAGE COST PER
 GALLON YOU EXPECT TO PAY
 ? 1.11
 ENTER THE NUMBER OF DAYS IT
 WILL TAKE YOU
 ? 1
 FOR DAY 1
 ENTER YOUR STOPPING
 DESTINATION
 ? CITY Y
 ENTER YOUR MILES TRAVELED
 ? 600
 ENTER YOUR COST FOR MEALS
 ? 50
 ENTER YOUR COST OF LODGING
 ? 0
 ENTER ANY OTHER COSTS
 ? 25

 RESULTS OF ANALYSIS

RESULTS OF ROUTE 1 NORTHERN
 PRESS ANY KEY TO CONT.
 DAY 1

STOP AT	CITY Y
MILEAGE	500

GAS \$	62.5
MEALS \$	50
LODGING \$	0
OTHER \$	10

TOTAL \$	122.5

TOTAL COST FOR THIS ROUTE
 IS: 122.5

RESULTS OF ROUTE 2 SOUTHERN
 PRESS ANY KEY TO CONT.
 DAY 1

STOP AT	CITY Y
MILEAGE	600

GAS \$	60.54545455
MEALS \$	50
LODGING \$	0
OTHER \$	25

TOTAL \$	135.5454545

TOTAL COST FOR THIS ROUTE
 IS: 135.5454545

MAJOR SYMBOL TABLE - TRIP PLANNING - EXTENDED

I	NAME	.. DESCRIPTION	I
I	C()	.. MILES PER GALLON ARRAY	I
I	G()	.. AVERAGE COST PER GALLON ARRAY	I
I	D()	.. DAY ARRAY	I
I	D1()	.. NUMBER OF DAYS PER ROUTE ARRAY	I
I	D\$()	.. DAILY STOPPING POINT ARRAY	I
I	M()	.. MILES TRAVELED ARRAY	I
I	F()	.. FOOD COST ARRAY	I
I	L()	.. LODGING COST ARRAY	I
I	O()	.. OTHER COST ARRAY	I
I	N\$()	.. ROUTE NAME ARRAY	I
I	Y\$()	.. TOTAL DAILY COST ARRAY	I
I	R	.. NUMBER OF ROUTES	I
I	J	.. HORIZONTAL PRINT CONTROL	I
I	J1	.. HORIZONTAL PRINT CONTROL	I
I	X	.. GASOLINE COSTS	I
I	TO	.. TOTAL COSTS	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. 2 DIMENSION ARRAYS	I

3

Kitchen Helpmates

Recipe Conversion

Meal Planning

Diet Planning—Version 1

Diet Planning—Version 2

Categorizing Recipes—Version 1

Categorizing Recipes—Version 2

Freezer Inventory—Basic Version

Freezer Inventory—Extended Version

Supermarket List

RECIPE CONVERSION

Description

This program converts given quantities of recipe ingredients based upon the number of servings in the basic recipe to the quantities needed for the number of servings desired.

Functions of the Program

The program accepts recipe name, the number of servings in the basic recipe, the number of servings desired, and the individual ingredients of the recipe. The quantities are converted for the desired number of servings, and the modified recipe is printed.

Instructions for Use

Run the program and answer the questions asked.

Data Entry

All data is entered through the keyboard in response to program prompting.

Output Description

See example provided.

```
10 CALL CLEAR
20 REM RECIPE CONVERSION PROGRAM
30 REM ***** DATA INITIATION *****
40 M0=25
50 DIM N(25)
60 DIM T$(25)
70 DIM D$(25)
80 REM ***** START OF RECIPE ENTRY *****
90 PRINT "ENTER RECIPE NAME "
100 INPUT R$
110 PRINT "ENTER NUMBER OF SERVINGS IN": "RECIPE ENTERED";
120 INPUT Q
130 PRINT "ENTER NUMBER OF SERVINGS": "WANTED";
140 INPUT W
150 PRINT "ENTER NUMBER, QTY, AND ITEM": "EXAMPLE 2,TSP,WATER (ENTER": "0,0,0
    WHEN DONE)"
160 FOR I=1 TO M0
170 N(I)=0
180 INPUT N(I),T$(I),D$(I)
190 IF N(I)=0 THEN 210
200 NEXT I
210 M0=M0-I-1
220 REM ***** SERVING CONVERSION AREA *****
230 C=W/Q
240 FOR I=1 TO M0
250 N(I)=N(I)*C
260 NEXT I
270 REM *****PRINT AREA *****
280 PRINT
290 PRINT
300 PRINT "RECIPE- ";R$; " FOR";W
310 PRINT
```


MEAL PLANNING

Description

This program produces a menu and checklist for determining additional grocery items required. Grocery items are categorized for ease in shopping.

Functions of the Program

The program initializes all data items for the food categories first. Following this initialization, the first day's results are analyzed and printed, followed by each succeeding day, for all of the days included as data items. The last item printed is a list for shopping use. Multiple passes through the data entries are made to insure correct categorization of items.

Instructions for Use

Prior to running the program, the data items for each meal must be entered using DATA statements.

Data Entry

All data is entered using DATA statements.

Data Formats

There are three types of data entries:

1. A master record is required for each day entered:
*, Day name
2. A meal record is required for each meal that gives the meal number of the day. The format is:
N, Meal number of the day
3. Menu item entries are entered for each item. The format is:
Food category code, Item description

Output Description

See example provided. Output is in two sections:

1. A menu for each day included in the data items.
2. A grocery list of the items required for the menu.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

Suggested Enhancements

You may wish to have the data entered via the keyboard rather than through DATA statements. To accomplish this, an array will be required to hold the data.


```

10 CALL CLEAR
20 REM MEAL PLANNING PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=8"
60 REM ***** DATA INITIALIZATION *****
70 DIM D$(31)
80 M0=7
90 DIM N$(3)
100 N$(1)="BREAKFAST"
110 N$(2)="LUNCH"
120 N$(3)="DINNER"
130 DIM D$(7)
140 DIM F$(7)
150 M=1000
160 F$(1)="M"
170 D$(1)="MEATS"
180 F$(2)="FV"
190 D$(2)="FRESH VEGETABLES"
200 F$(3)="CV"
210 D$(3)="CANNED VEGETABLES"
220 F$(4)="FF"
230 D$(4)="FRESH FRUIT"
240 F$(5)="CF"
250 D$(5)="CANNED FRUIT"
260 F$(6)="D"
270 D$(6)="DAIRY"
280 F$(7)="O"
290 D$(7)="OTHER"
300 REM *****
310 REM ***** PROCESSING AREA *****
320 FOR K=1 TO M
330 N0=0
340 READ T$
350 IF T$="END" THEN 530
360 IF T$="*" THEN 520
370 IF T$="N" THEN 420
380 READ M$
390 D0$(N1-1)*10+C)=M$
400 M$=" "
410 GOTO 490
420 READ N1
430 IF N1<=N0 THEN 450
440 N0=N1
450 IF C0<=C1 THEN 490
460 C1=C0
470 C0=0
480 C=0
490 C=C+1
500 C0=C0+1
510 GOTO 810
520 READ M$
530 IF K=1 THEN 790
540 C=N1
550 REM ***** MENU PRINTING *****
560 PRINT #1
570 PRINT #1
580 PRINT #1:TAB(30);X$
590 PRINT #1:TAB(5);N$(1);TAB(29);N$(2);TAB(47);N$(3)
600 FOR K1=1 TO C
610 PRINT #1:TAB((K1-1)*20);"I-----";
620 NEXT K1
630 PRINT #1;"I"
640 FOR L=1 TO C1
650 K3=1
660 FOR K1=1 TO C
670 K3=(K1-1)*10+L
680 PRINT #1:TAB((K1-1)*20+2);
690 IF D0$(K3)=" " THEN 730
700 PRINT #1:D0$(K3);

```

```

710 D0$(K3)=" "
720 GOTO 730
730 NEXT K1
740 PRINT #1
750 NEXT L
760 C1=0
770 C=0
780 C0=0
790 IF T$="END" THEN 820
800 X$=M$
810 NEXT K
820 REM ***** GROCERY LIST PRINTING *****
830 PRINT #1
840 PRINT #1
850 PRINT #1
860 PRINT #1
870 PRINT #1:"GROCERY ITEMS REQUIRED"
880 PRINT #1
890 PRINT #1
900 FOR K=1 TO M0
910 RESTORE
920 PRINT #1:D$(K)
930 PRINT #1:"-----"
940 FOR I=1 TO M
950 READ T$
960 IF T$="END" THEN 1010
970 READ M$
980 IF T$<>F$(K) THEN 1000
990 PRINT #1:"( )";TAB(5);M$
1000 NEXT I
1010 PRINT #1
1020 NEXT K
1030 REM *****
1040 REM ***** PROGRAM TERMINATION POINT *****
1050 PRINT #1
1060 PRINT #1
1070 STOP
1080 REM *****
1090 REM ***** DATA ENTRIES FOLLOW *****
1100 DATA *,MON
1110 DATA N,1
1120 DATA M,BACON
1130 DATA FF,BANANAS
1140 DATA O,TOAST
1150 DATA O,EGGS
1160 DATA N,3
1170 DATA M,SIRLOIN STEAK
1180 DATA V,GREEN BEANS
1190 DATA FV,FRENCH FRIES
1200 DATA O,CHERRY PIE
1210 DATA *,TUES
1220 DATA N,1
1230 DATA M,SAUSAGE
1240 DATA O,PANCAKES
1250 DATA FF,PEAS
1260 DATA N,3
1270 DATA M,MEATLOAF
1280 DATA FV,TOMATOES
1290 DATA FV,BAKED POTATOES
1300 DATA FF,PEACHES
1310 DATA END
1320 CLOSE #1

```

BREAKFAST	MON LUNCH	DINNER
BACON		SIRLOIN STEAK
BANANAS		GREEN BEANS
TOAST		FRENCH FRIES
EGGS		CHERRY PIE

BREAKFAST	TUES LUNCH	DINNER
-----I-----I-----I-----I		
SAUSAGE		MEATLOAF
PANCAKES		TOMATOES
PEAS		BAKED POTATOES
		PEACHES

GROCERY ITEMS REQUIRED

MEATS

-
- () BACON
 - () SIRLOIN STEAK
 - () SAUSAGE
 - () MEATLOAF

FRESH VEGETABLES

-
- () FRENCH FRIES
 - () TOMATOES
 - () BAKED POTATOES

CANNED VEGETABLES

FRESH FRUIT

-
- () BANANAS
 - () PEAS
 - () PEACHES

CANNED FRUIT

DAIRY

OTHER

-
- () TOAST
 - () EGGS
 - () CHERRY PIE
 - () PANCAKES

MAJOR SYMBOL TABLE - MEAL PLANNING

I	-----I	I
I	NAME .. DESCRIPTION	I
I	-----I	I
I	D0\$.. ARRAY OF INPUT ITEMS	I
I	N\$() .. MEAL NAME ARRAY	I
I	D\$() .. MASTER FOOD CATEGORY ARRAY	I
I	F\$() .. MASTER CATEGORY CODE ARRAY	I
I	M .. MAXIMUM NUMBER OF DATA READS	I
I	T\$.. TRANSACTION CODE	I
I	M\$.. TRANSACTION ITEM/DAY	I
I	C .. COUNTER	I
I	N1 .. MEAL NUMBER IN DAY	I
I	-----I	I

FUNCTIONS USED

I	-----I	I
I	NAME .. DESCRIPTION	I
I	-----I	I
I	TAB .. FORMATS PRINT LINES	I
I	DIM .. SINGLE DIMENSION ARRAY	I
I	-----I	I

DIET PLANNING – VERSION 1

Description

This program produces a menu, complete with calorie values, calories per meal, and total calories per day. After printing the menu, it produces a list of all food items scheduled for each of several major food groups.

Functions of the Program

The program initializes the food group categories first. Following this, menus are printed, calorie counts produced, and daily totals are printed. The last task of the program is the printing of the food group lists. It does so by rereading the data items for each major food group.

Instructions for Use

Prior to running the program, the menu items must be entered using DATA statements.

Data Entry

All data is entered using DATA statements.

Data Formats

There are three types of data entries:

1. A master card is required for each day. Its format is:
*, Day name
2. A meal number entry is required for each meal of the day:
N, Meal number of the day
3. Menu items are entered for each item. The format is:
Food category code, Item description, Calories

Output Description

See example provided. Output is in two sections:

1. A menu for each day entered in the DATA statements is produced.
2. A list of foods, scheduled by major food groups, is printed.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

Suggested Enhancements

You may wish to have the data entered through the keyboard rather than through DATA statements. To accomplish this, an array will be required to hold the items entered.

```

10 CALL CLEAR
20 REM   DIET PLANNING PROGRAM - BASIC
30 REM   ***** OPEN STATEMENT FOR PRINTER *****
40 REM   *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=8"
60 REM   ***** DATA INITIALIZATION *****
70 DIM D$(31)
80 DIM A$(31)
90 M0=9
100 DIM N$(3)
110 N$(1)="BREAKFAST"
120 N$(2)="LUNCH"
130 N$(3)="DINNER"
140 DIM D$(9)
150 DIM F$(9)
160 M=1000
170 F$(1)="M"
180 D$(1)="MEATS"
190 F$(2)="FV"
200 D$(2)="FRUITS/VEGETABLES"
210 F$(3)="BC"
220 D$(3)="BREADS/CEREALS"
230 F$(4)="B"
240 D$(4)="BEVERAGES"
250 F$(5)="S"
260 D$(5)="SOUPS"
270 F$(6)="SD"
280 D$(6)="SWEETS/DESSERTS"
290 F$(7)="F"
300 D$(7)="FATS"
310 F$(8)="D"
320 D$(8)="DAIRY"
330 F$(9)="O"
340 D$(9)="OTHER"
350 FOR I=1 TO 31
360 D$(I)=" "
370 NEXT I
380 REM   *****
390 REM   ***** PROCESSING AREA *****
400 FOR K=1 TO M
410 N0=0
420 READ T$
430 IF T$="END" THEN 640
440 IF T$="*" THEN 630
450 IF T$="N" THEN 510
460 READ M$,A
470 D$( (N1-1)*10+C)=M$
480 A$( (N1-1)*10+C)=A
490 M$=" "
500 GOTO 580
510 READ N1
520 IF N1<=N0 THEN 540
530 N0=N1
540 IF C0<=C1 THEN 580
550 C1=C0
560 C0=0
570 C=0
580 C=C+1
590 C0=C0+1
600 D$( (N1-1)*10+C)=M$
610 A$( (N1-1)*10+C)=A
620 GOTO 1060
630 READ M$
640 IF K=1 THEN 1040
650 C=N1
660 REM   ***** MENU PRINTING *****
670 PRINT #1
680 PRINT #1
690 PRINT #1:TAB(30);X$
700 PRINT #1:TAB(5);N$(1);TAB(29);N$(2);TAB(47);N$(3)

```

```

710 FOR K1=1 TO C
720 PRINT #1:TAB((K1-1)*20);"I-----";
730 NEXT K1
740 PRINT #1:"I"
750 FOR L=1 TO C1
760 K3=1
770 FOR K1=1 TO C
780 K3=(K1-1)*10+L
790 PRINT #1:TAB((K1-1)*20+2);
800 IF DO$(K3)=" " THEN 860
810 PRINT #1:DO$(K3);A0(K3);
820 TO(K1)=TO(K1)+A0(K3)
830 DO$(K3)=" "
840 A0(K3)=0
850 GOTO 860
860 NEXT K1
870 PRINT #1
880 NEXT L
890 PRINT #1
900 FOR K1=1 TO C
910 PRINT #1:TAB(19*(K1-1)+4);"CALORIES";TAB(19*(K1-1)+12);TO(K1);
920 T1=T1+TO(K1)
930 TO(K1)=0
940 NEXT K1
950 PRINT #1
960 PRINT #1
970 PRINT #1:"*****"
980 PRINT #1:"DAILY TOTAL IS ";T1
990 PRINT #1:"*****"
1000 C1=0
1010 T1=0
1020 C=0
1030 CO=0
1040 IF T$="END" THEN 1070
1050 X$=M$
1060 NEXT K
1070 REM ***** ANALYSIS BY FOOD TYPE *****
1080 PRINT #1
1090 PRINT #1
1100 PRINT #1
1110 PRINT #1
1120 PRINT #1:"FOODS PLANNED BY GROUP"
1130 PRINT #1
1140 PRINT #1
1150 FOR K=1 TO M0
1160 RESTORE
1170 PRINT #1:D$(K)
1180 PRINT #1:"-----"
1190 FOR I=1 TO M
1200 READ T$
1210 IF T$="N" THEN 1280
1220 IF T$="*" THEN 1280
1230 IF T$="END" THEN 1300
1240 READ M$,A
1250 IF T$<>F$(K) THEN 1290
1260 PRINT #1:"( )";TAB(5);M$;A
1270 GOTO 1290
1280 READ M$
1290 NEXT I
1300 PRINT #1
1310 NEXT K
1320 REM *****
1330 REM ***** PROGRAM TERMINATION POINT *****
1340 PRINT #1
1350 PRINT #1
1360 STOP
1370 REM *****
1380 REM ***** DATA ENTRIES FOLLOW *****
1390 DATA *,MON
1400 DATA N,1

```

1410 DATA M, BACON, 60
 1420 DATA B, ORANGE JUICE, 60
 1430 DATA FV, BANANAS, 85
 1440 DATA BC, TOAST, 70
 1450 DATA F, MARGARINE, 25
 1460 DATA M, SOFT BOILED EGG, 80
 1470 DATA N, 3
 1480 DATA M, SIRLOIN STEAK, 330
 1490 DATA D, GLASS MILK, 160
 1500 DATA FV, GREEN BEANS, 15
 1510 DATA FV, FRENCH FRIES, 215
 1520 DATA SD, CHERRY PIE, 310
 1530 DATA *, TUES
 1540 DATA N, 1
 1550 DATA M, SAUSAGE, 250
 1560 DATA BC, PANCAKES, 60
 1570 DATA SD, SYRUP, 55
 1580 DATA FV, PEAR, 100
 1590 DATA N, 3
 1600 DATA M, BROILED SALMON, 155
 1610 DATA FV, TOMATOES, 20
 1620 DATA FV, BAKED POTATO, 145
 1630 DATA FV, 1 PEACH, 30
 1640 DATA F, MARGARINE, 25
 1650 DATA END

>RUN

MON

BREAKFAST	LUNCH	DINNER
BACON 60 ORANGE JUICE 60 BANANAS 85 TOAST 70 MARGARINE 25 SOFT BOILED EGG 80		SIRLOIN STEAK 330 GLASS MILK 160 GREEN BEANS 15 FRENCH FRIES 215 CHERRY PIE 310
CALORIES 360	CALORIES 0	CALORIES 1030

 DAILY TOTAL IS 1410

TUES

BREAKFAST	LUNCH	DINNER
SAUSAGE 250 PANCAKES 60 SYRUP 55 PEAR 100		BROILED SALMON 155 TOMATOES 20 BAKED POTATO 145 1 PEACH 30 MARGARINE 25
CALORIES 465	CALORIES 0	CALORIES 375

 DAILY TOTAL IS 840

FOODS PLANNED BY GROUP

MEATS

- () BACON 60
- () SOFT BOILED EGG 80
- () SIRLOIN STEAK 330

- () SAUSAGE 250
- () BROILED SALMON 155

FRUITS/VEGETABLES

- () BANANAS 85
- () GREEN BEANS 15
- () FRENCH FRIES 215
- () PEAR 100
- () TOMATOES 20
- () BAKED POTATO 145
- () 1 PEACH 30

BREADS/CEREALS

- () TOAST 70
- () PANCAKES 60

BEVERAGES

- () ORANGE JUICE 60

SOUPS

SWEETS/DESSERTS

- () CHERRY PIE 310
- () SYRUP 55

FATS

- () MARGARINE 25
- () MARGARINE 25

DAIRY

- () GLASS MILK 160

OTHER

MAJOR SYMBOL TABLE - DIET PLANNING - VERSION 1

I	NAME	DESCRIPTION	I
I	DO\$()	INPUT ITEM ARRAY	I
I	AO\$()	ARRAY OF INPUT CALORIES	I
I	N\$()	ARRAY OF MEAL NAMES	I
I	D\$()	ARRAY OF MASTER CATEGORY CODES	I
I	F\$()	ARRAY OF MASTER CATEGORY DESCRIPTIONS	I
I	T\$	TRANSACTION CODE	I
I	M\$	TRANSACTION ITEM	I
I	A	TRANSACTION CALORIES	I
I	N1	MEAL NUMBER	I
I	C	COUNTER	I
I	C1	COUNTER	I
I	T1	TOTAL DAILY CALORIES	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	DIM	SINGLE DIMENSION ARRAYS	I

DIET PLANNING – VERSION 2

Description

This program for diet planning deals with fixed diet requirements and produces a menu selection list based upon the diet's requirements.

Functions of the Program

This program differs substantially from the other version of diet planning provided in this book. The program reads the data items; determines whether the item is a member of a group or subgroup of foods and whether it is optional or required; and then prints the item accordingly. The processing of the various groups/subgroups is accomplished in separate routines for ease of understanding or for modification, if desired.

Instructions for Use

Provide the data items for the diet prior to running the program for the first time.

Data Entry

All data is entered using DATA statements.

Data Formats

Several types of data formats are available for your use, as follows:

1. A master item is required for each meal. Its format is:
*, Meal name
2. Group choices are provided by an entry of the following form:
G, Number of choices (choices must follow immediately)
3. Subgroup items are indicated by the following:
S, Number of optional choices (choices must follow immediately)
4. Required items are indicated by the following:
R, Required item name
5. Choices for the optional entries are provided in Englishlike form, without any transaction code.

Note the END data item.

Output Description

See example provided. A separate column for each day is printed for use in menu selection.

Suggested Enhancements

You may wish to extend the program to accept the individual's menu choices and compare them against the selection criteria. Following a check for accuracy, the menu may be printed.

```

10 CALL CLEAR
20 REM DIET PLANNING PROGRAM 2
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 C=1
60 S1=0
70 PRINT "HOW MANY DAYS SHALL I PRINT?"
80 INPUT N
90 PRINT
100 PRINT
110 REM *****PROCESSING AREA *****
120 FOR I=1 TO M
130 READ T$
140 IF T$="END" THEN 730
150 IF T$="*" THEN 300
160 IF T$="B" THEN 470
170 IF T$="S" THEN 530
180 IF T$="R" THEN 610
190 IF S1>0 THEN 230
200 PRINT TAB(2);C;"-";T$;
210 C=C+1
220 GOTO 250
230 PRINT TAB(2);S1;"-";T$;
240 S1=S1+1
250 FOR K=1 TO N
260 PRINT TAB(K*3+46);"(");
270 NEXT K
280 PRINT
290 GOTO 710
300 REM *****PROCESS NEW MEAL *****
310 PRINT
320 PRINT "*****"
330 FOR K=1 TO N
340 REM
350 NEXT K
360 PRINT
370 READ M$
380 PRINT TAB(5);M$;TAB(20);"DAY"
390 PRINT "*****"
400 FOR K=1 TO N
410 PRINT TAB(K*3+45);K;
420 NEXT K
430 PRINT
440 S1=0
450 C=1
460 GOTO 710
470 REM *****PROCESS NEW GROUP *****
480 PRINT
490 READ G0
500 PRINT "CHOOSE";G0;"OF THE FOLLOWING:"
510 S1=0
520 GOTO 710
530 REM ***** SUB GROUP PROCESSING *****
540 S1=0
550 PRINT
560 READ S0
570 S1=S1+1
580 PRINT TAB(2);C;"ANY";S0;" OF THE FOLLOWING:"
590 C=C+1
600 GOTO 710
610 REM *****REQUIRED ITEMS *****
620 PRINT
630 READ R$
640 C=1
650 S1=0
660 PRINT "REQUIRED ";R$;
670 FOR K=1 TO N
680 PRINT TAB(K*3+46);"(");
690 NEXT K
700 PRINT

```

```

710 NEXT I
720 REM *****
730 REM ***** PROGRAM TERMINATION FOLLOW *****
740 PRINT
750 PRINT
760 STOP
770 REM *****
780 REM ***** DATA ENTRIES FOLLOW *****
790 DATA *,BREAKFAST
800 DATA G,1
810 DATA SOFT BOILED EGG
820 DATA POACHED EGG
830 DATA S,2
840 DATA ORANGE JUICE
850 DATA FRESH ORANGE
860 DATA GRAPEFRUIT
870 DATA GRAPE/JUICE
880 DATA G,1
890 DATA 1 SLICE BACON
900 DATA 2 LINKS SAUSAGE
910 DATA G,1
920 DATA TOAST
930 DATA MUFFIN
940 DATA *,LUNCH
950 DATA R,2 SLICES BREAD
960 DATA G,1
970 DATA 1 SLICES BOLOGNA
980 DATA 2 SLICES TURKEY
990 DATA G,1
1000 DATA BUTTER
1010 DATA MARGARINE
1020 DATA MAYONAISE
1030 DATA R,MILK
1040 DATA *,DINNER
1050 DATA G,2
1060 DATA APPLE,PEACH,PEAR,ORANGE JUICE,GRAPEFRUIT JUICE
1070 DATA S,2
1080 DATA LETTUCE,TOMATO,GREEN PEPPERS
1090 DATA S,1
1100 DATA BUTTER
1110 DATA MARGARINE,SALAD DRESSING
1120 DATA G,1
1130 DATA 4 OZ BEEF
1140 DATA 4 OZ HAM
1150 DATA 6 OZ BROILED CHICKEN
1160 DATA END

```

HOW MANY DAYS SHALL I PRINT? 2

BREAKFAST DAY

1 2

CHOOSE 1 OF THE FOLLOWING:

- 1 -SOFT BOILED EGG () ()
- 2 -POACHED EGG () ()

3 ANY 2 OF THE FOLLOWING:

- 1 -ORANGE JUICE () ()
- 2 -FRESH ORANGE () ()
- 3 -GRAPEFRUIT () ()
- 4 -GRAPE/JUICE () ()

CHOOSE 1 OF THE FOLLOWING:

- 4 -1 SLICE BACON () ()
- 5 -2 LINKS SAUSAGE () ()

CHOOSE 1 OF THE FOLLOWING:

6 -TOAST () ()
 7 -MUFFIN () ()

LUNCH DAY

1 2

REQUIRED 2 SLICES BREAD (X) (X)

CHOOSE 1 OF THE FOLLOWING:

1 -1 SLICES BOLOGNA () ()
 2 -2 SLICES TURKEY () ()

CHOOSE 1 OF THE FOLLOWING:

3 -BUTTER () ()
 4 -MARGARINE () ()
 5 -MAYONAISE () ()

REQUIRED MILK (X) (X)

DINNER DAY

1 2

CHOOSE 2 OF THE FOLLOWING:

1 -APPLE () ()
 2 -PEACH () ()
 3 -PEAR () ()
 4 -ORANGE JUICE () ()
 5 -GRAPEFRUIT JUICE () ()

6 ANY 2 OF THE FOLLOWING:

1 -LETTUCE () ()
 2 -TOMATO () ()
 3 -GREEN PEPPERS () ()

7 ANY 1 OF THE FOLLOWING:

1 -BUTTER () ()
 2 -MARGARINE () ()
 3 -SALAD DRESSING () ()

CHOOSE 1 OF THE FOLLOWING:

8 -4 OZ BEEF () ()
 9 -4 OZ HAM () ()
 10 -6 OZ BROILED CHICKEN () ()

MAJOR SYMBOL TABLE - DIET PLANNING - VERSION 2

I	NAME	DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	N	.. NUMBER OF DAYS TO PRINT	I
I	T\$	.. TRANSACTION TYPE	I
I	C	.. ITEM COUNTER	I
I	GO	.. NUMBER OF GROUP ITEMS TO SELECT	I
I	SO	.. NUMBER OF SUBGROUP ITEMS TO SELECT	I
I	R\$	.. DESCRIPTION OF REQUIRED ITEM	I
I	M\$	.. MEAL NAME	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

CATEGORIZING RECIPES – VERSION 1

Description

This simple program allows the cook to categorize favorite recipes and locate them instantly with the help of the computer.

Functions of the Program

The program accepts the recipe code to search for and then locates all recipes categorized with that code. The recipe name is printed, along with its location and page number.

Instructions for Use

Recipes must be entered prior to running the program.

Data Entry

All data is entered using DATA statements.

Data Format

The format of the DATA statement is:

Recipe code, Recipe name, Location, Page number

Output Description

See example provided. All recipes with a code that matches the selection criteria will be printed, or all entries can be printed, if desired.

```
10 CALL CLEAR
20 REM   RECIPE LOCATING PROGRAM   -   BASIC
30 REM   ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "SHALL I PRINT ALL ENTRIES": "( Y OR N )"
60 INPUT A$
70 PRINT
80 IF A$="Y" THEN 160
90 PRINT "ENTER THE RECIPE CODE": "TO FIND"
100 INPUT X$
110 PRINT
120 PRINT
130 PRINT
140 PRINT
150 PRINT X$
160 PRINT TAB(7); "RECIPE"; TAB(14); "LOCATION"; TAB(25); "PAGE"
170 PRINT "-----"
180 PRINT
190 REM   ***** PROCESSING AREA *****
200 FOR I=1 TO M
210 READ C$
220 IF C$="END" THEN 300
230 READ R$,L$,P$
240 IF A$<>"Y" THEN 270
250 PRINT C$; TAB(7); R$; TAB(14); L$; TAB(25); P$
260 GOTO 290
270 IF C$<>X$ THEN 290
280 PRINT TAB(7); R$; TAB(14); L$; TAB(25); P$
290 NEXT I
300 REM   ***** PROGRAM TERMINATION POINT *****
```

```

310 PRINT
320 PRINT
330 STOP
340 REM ***** DATA ENTRIES FOLLOW *****
350 DATA EGGS,EGGS BENEDICT,COOKBOOK 1,200
360 DATA EGGS,POACHED EGGS,COOKBOOK 1,178
370 DATA EGGS,FRIED,COOKBOOK 3,13
380 DATA STEAK,BROILED STEAK,COOKBOOK 2,16
390 DATA LAMB,LAMB CHOPS,COOKBOOK 4,18
400 DATA EGGS,HARD BOILED,COOKBOOK 1,16
410 DATA EGGS,HARD BOILED,COOKBOOK 4,13
420 DATA STEAK,SALISBURY STEAK,COOKBOOK 2,16
430 DATA END

```

```

>RUN
SHALL I PRINT ALL ENTRIES
( Y OR N )
?Y

```

	RECIPE LOCATION	PAGE
EGGS	EGGS BENEDICT	
	COOKBOOK 1	200
EGGS	POACHED EGGS	
	COOKBOOK 1	178
EGGS	FRIED	COOKBOOK 3 13
STEAK	BROILED STEAK	
	COOKBOOK 2	16
LAMB	LAMB CHOPS	
	COOKBOOK 4	18
EGGS	HARD BOILED	
	COOKBOOK 1	16
EGGS	HARD BOILED	
	COOKBOOK 4	13
STEAK	SALISBURY STEAK	
	COOKBOOK 2	16

```

>RUN
SHALL I PRINT ALL ENTRIES
( Y OR N )
?N

```

```

ENTER THE RECIPE CODE
TO FIND
?STEAK

```

STEAK	RECIPE LOCATION	PAGE
	BROILED STEAK	
	COOKBOOK 2	16
	SALISBURY STEAK	
	COOKBOOK 2	16

MAJOR SYMBOL TABLE - RECIPE - VERSION 1

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I M	.. MAXIMUM NUMBER OF DATA READS
I X\$	.. RECIPE CODE TO SELECT
I R\$	.. RECIPE NAME
I L\$	.. LOCATION
I P\$	.. PAGE LOCATION
I C\$	.. TRANSACTION CODE
I-----I	

FUNCTIONS USED

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I TAB	.. FORMATS PRINT LINES
I-----I	

CATEGORIZING RECIPES – VERSION 2

Description

This recipe program is provided for those who wish to recall their favorite recipes with the push of a button. The recipes are entered as data to the program and then are printed upon request.

Functions of the Program

The program allows both the printing of all recipe names available and the printing of individual recipes, complete with instructions and ingredients.

Instructions for Use

All recipe items must be entered prior to running the program.

Data Entry

All data is entered using DATA statements.

Data Formats

Data is entered in two formats:

1. The master record for each recipe has the following form:
*, Recipe code, Recipe name
2. Recipe instructions are entered in Englishlike form, without special coding.

Note the END record.

Output Description

See example provided. Output can be either a condensed list for review purposes or a detailed printout of the selected recipe.

Suggested Enhancements

This application is ideal for conversion to disk or tape data file storage.

```
10 CALL CLEAR
20 REM     RECIPE FILE PROGRAM - BASIC
30 REM     ***** DATA INITIALIZATION *****
40 M=10000
50 REM     ***** BEGIN PROCESSING *****
60 PRINT "WOULD YOU LIKE TO SEE A LIST"; "OF ALL RECIPES ( Y OR N)";
70 INPUT A$
80 PRINT
90 PRINT
100 IF A$(">")"Y" THEN 260
110 PRINT "CATEGORY";TAB(18);"RECIPE"
120 PRINT "-----"
130 FOR I=1 TO M
140 READ C1$
150 IF C1$="END" THEN 200
160 IF C1$(">")"*" THEN 190
170 READ C2$,R$
180 PRINT C2$;TAB(12);R$
```


MAJOR SYMBOL TABLE - RECIPE - VERSION 2

I	NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	C1\$	.. TRANSACTION CODE/INSTRUCTION	I
I	C2\$	.. RECIPE CODE	I
I	R\$	.. RECIPE NAME	I
I	X\$	.. RECIPE TO SEARCH FOR	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

FREEZER INVENTORY – BASIC VERSION

Description

This program allows you to maintain and control an inventory of all items in your freezer. Either a full list of the freezer's contents or a list of all items of a selected type can be printed when desired.

Functions of the Program

The program initializes the entries based upon keyboard inputs and then prints the requested items.

Instructions for Use

Freezer inventory items must be given an item number and entered as data to the program prior to running it. Items used should be recorded and deleted from the data list at the time of use to insure the continued accuracy of your inventory.

Data Entry

Data is entered using DATA statements.

Data Format

A single data format is used by the program. It is recommended that the data items be entered in item number order. The format is:

Item code, Description, Item number,
Month, Year item was placed in freezer, Months of freezer life

Note the END record.

Output Description

See example provided. Two forms of output are available:

1. A list of the current contents (all entries).
2. A list of all items of a specified type.

Suggested Enhancements

The possibility of disk or tape-file storage and update of the inventory items should be considered for ease of use.

```
10 CALL CLEAR
20 REM   FREEZER INVENTORY PROGRAM
30 REM   ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "ENTER THE DATE (MONTH, DAY, ":"YEAR) I.E., JUL, 15, 1983"
60 INPUT C1$, C2, C3
70 PRINT "SHALL I PRINT ALL ENTRIES": "( Y OR N)";
80 INPUT A$
90 PRINT
100 IF A$="Y" THEN 140
110 PRINT "ENTER THE ITEM CODE TO": "FIND";
120 INPUT X$
130 PRINT
```


FREEZER INVENTORY – EXTENDED VERSION

Description

This program provides a perpetual inventory of your freezer's contents, complete with an analysis of the items scheduled to reach their maximum freezer life. Its use will help to insure the greatest possible savings from your freezer.

Functions of the Program

The program initializes all data elements, including month name abbreviations prior to processing. Depending upon the answers that you provide to the questions asked by the program, a list will be provided in one of several formats. The expiration date list is sorted by expiration dates (computed from the date in and the months of freezer life for the item). The program's various processing elements have been separated to provide flexibility for extension of any of its features.

Instructions for Use

Freezer inventory items must be entered as data items to the program. Items used should be recorded and deleted from the data list at the time of use to insure the continued accuracy of your inventory.

Data Entry

All data items are entered as DATA statements.

Data Format

A single data format is used:

Item code, Description, Item number,
Month, Year item was placed in freezer, Months of freezer life

Note the END data card.

Output Description

See example provided. Three forms of reports are available:

1. A list of the freezer's entire contents.
2. A list of all items of a specific type.
3. A sorted list that is in order by expiration date or item types.

Suggested Enhancements

The possibility of disk or tape-file storage should be considered for this program.

```

10 CALL CLEAR
20 REM ***** FREEZEER INVENTORY PROGRAM *****
30 REM ***** DATA INITIALIZATION *****
40 DIM E3(37)
50 DIM E4(37)
60 DIM M$(13)
70 M$(1)="JAN"
80 M$(2)="FEB"
90 M$(3)="MAR"
100 M$(4)="APR"
110 M$(5)="MAY"
120 M$(6)="JUN"
130 M$(7)="JUL"
140 M$(8)="AUG"
150 M$(9)="SEP"
160 M$(10)="OCT"
170 M$(11)="NOV"
180 M$(12)="DEC"
190 M$(13)="???"
200 M=1000
210 PRINT "ENTER THE DATE (MONTH,DAY: ",YEAR) I.E., JUL,15,1979"
220 INPUT C1$,C2,C3
230 PRINT "SHALL I PRINT ALL ENTRIES":( Y OR N );
240 E2=D2
250 INPUT A$
260 PRINT
270 IF A$="Y" THEN 310
280 PRINT "ENTER THE ITEM CODE TO": "FIND";
290 INPUT X$
300 GOTO 390
310 PRINT "SHALL I PRINT THE ITEMS IN": "THE ORDER I HAVE THEM ( Y OR N )";
320 INPUT A0$
330 IF A0$="Y" THEN 360
340 PRINT "IN ORDER BY ITEM CODE (I) OR": "EXPIRATION DATE (E)";
350 INPUT A$
360 PRINT
370 PRINT
380 PRINT
390 REM ***** PROCESSING AREA *****
400 PRINT TAB(2); "TODAY'S DATE: ";C1$;C2;C3
410 PRINT
420 IF A$="I" THEN 640
430 IF A$="E" THEN 970
440 PRINT "CODE";TAB(6); "ITEM";TAB(12); "NBR";TAB(16); "DATE"
450 PRINT TAB(17); "IN";TAB(22); "MONTHS"
460 PRINT "-----"
470 REM
480 PRINT
490 FOR I=1 TO M
500 READ I1$
510 IF I1$="END" THEN 590
520 READ I2$,N,D1$,D2,T
530 IF A$<>"Y" THEN 560
540 PRINT I1$;TAB(6); I2$;TAB(12); N;TAB(17); D1$;D2;TAB(24); T
550 GOTO 580
560 IF I1$<>X$ THEN 580
570 PRINT I1$;TAB(6); I2$;TAB(11); N;TAB(16); D1$;D2;TAB(23); T
580 NEXT I
590 REM ***** PROGRAM TERMINATION POINT *****
600 PRINT
610 PRINT
620 PRINT
630 STOP
640 REM ***** ITEM CODE BREAKDOWN AND PRINT *****
650 PRINT "ITEM CODE";TAB(7); "ITEM";TAB(15); "NBR";TAB(19); "DATE";
660 PRINT TAB(24); "MTHS";TAB(19); "IN"
670 PRINT "-----"
680 REM
690 I=1
700 FOR J=1 TO M

```

```

710 READ I1$
720 IF I1$="END" THEN 880
730 READ K2$,N,D1$,D2,T
740 IF J>I THEN 850
750 IF J<I THEN 870
760 S$=I1$
770 IF I=1 THEN 850
780 RESTORE
790 FOR K=1 TO J
800 READ I1$,I2$,N,D1$,D2,T
810 IF S$<>I1$ THEN 830
820 C=C+1
830 NEXT K
840 IF C>1 THEN 880
850 IF I1$<>S$ THEN 870
860 PRINT I1$;TAB(7);I2$;TAB(15);D1$;D2;TAB(19);T
870 NEXT J
880 RESTORE
890 C=0
900 IF I>1 THEN 920
910 M=J-1
920 PRINT
930 I=I+1
940 IF I<=M THEN 700
950 GOTO 590
960 PRINT
970 REM ***** EXPERATION DATE BREAKDOWN AND PRINT *****
980 PRINT TAB(1);"EXP";TAB(8);"CODE";TAB(13);"ITEM";TAB(19);"NBR";TAB(23);"DATE"
990 PRINT "DATE"
1000 PRINT "-----"
1010 REM
1020 REM ***** BUILD AND SORT EXP DATE ARRAY *****
1030 FOR J=1 TO M
1040 READ I1$
1050 IF I1$="END" THEN 1180
1060 READ I2$,N,D1$,D2,T
1070 GOSUB 1490
1080 FOR K=1 TO 36
1090 IF E3(K)=0 THEN 1140
1100 IF E2<>E4(K) THEN 1130
1110 IF L1<>E3(K) THEN 1130
1120 GOTO 1170
1130 NEXT K
1140 E3(K)=L1
1150 M3=M3+1
1160 E4(K)=E2
1170 NEXT J
1180 REM ***** SORT ENTRIES *****
1190 FOR I=1 TO M3-1
1200 FOR K=I+1 TO M3
1210 IF E4(I)<E4(K) THEN 1300
1220 IF E4(I)>E4(K) THEN 1240
1230 IF E3(I)<=E3(K) THEN 1300
1240 E4(37)=E4(I)
1250 E3(37)=E3(I)
1260 E4(I)=E4(K)
1270 E3(I)=E3(K)
1280 E4(K)=E4(37)
1290 E3(K)=E3(37)
1300 NEXT K
1310 NEXT I
1320 REM ***** PRINT OF RESULTS AFTER THE SORT *****
1330 RESTORE
1340 FOR J=1 TO M3
1350 FOR I=1 TO M
1360 READ I1$
1370 IF I1$="END" THEN 1450
1380 READ I2$,N,D1$,D2,T
1390 GOSUB 1490
1400 IF E1$<>M$(E3(J)) THEN 1440

```



```

1410 IF E2<>E4(J) THEN 1440
1420 PRINT E1$;E2;TAB(8);I1$;TAB(13);I2$;TAB(18);N;TAB(23);D1$;D2;
1430 REM PRINT TAB(67);T
1440 NEXT I
1450 RESTORE
1460 PRINT
1470 NEXT J
1480 GOTO 590
1490 REM ***** EXPIRATION DATE CONVERSION *****
1500 E2=D2
1510 FOR L=1 TO 12
1520 IF M$(L)<>D1$ THEN 1550
1530 L1=L
1540 GOTO 1580
1550 NEXT L
1560 L1=13
1570 IF L1=13 THEN 1630
1580 L1=L1+T
1590 IF L1<=12 THEN 1630
1600 L1=L1-12
1610 E2=E2+1
1620 GOTO 1590
1630 E1$=M$(L1)
1640 RETURN
1650 REM ***** DATA FOR INITIALIZATION *****
1660 REM ***** DATA ENTRIES FOLLOW *****
1670 DATA BEEF,STEAK,100,JAN,79,18
1680 DATA PORK,ROAST,101,JAN,79,9
1690 DATA BEEF,BURGER,103,FEB,79,18
1700 DATA PORK,CHOPS,104,FEB,79,9
1710 DATA PORK,BACON,105,MAR,79,18
1720 DATA VEG,CORN,106,JUN,79,18
1730 DATA LAMB,CHOPS,107,AUG,79,6
1740 DATA PORK,BACON,108,DEC,79,6
1750 DATA BEEF,STEAK,109,JAN,79,18
1760 DATA BEEF,BURGER,110,FEB,79,18
1770 DATA END

```

```

>RUN
ENTER THE DATE (MONTH, DAY)
JUL,15,1979
SHALL I PRINT ALL ENTRIES
(Y OR N)
SHALL I PRINT THE ITEMS IN
THE ORDER I HAVE THEM (Y OR
N)

```

```

TODAY'S DATE: JUN 1 1983
CODE ITEM NBR DATE MTHS
IN
-----
BEEF STEAK 100 JAN 79 18
PORK ROAST 101 JAN 79 9
BEEF BURGER 103 FEB 79 18
PORK CHOPS 104 FEB 79 9
PORK BACON 105 MAR 79 18
VEG CORN 106 JUN 79 18
LAMB CHOPS 107 AUG 79 6
PORK BACON 108 DEC 79 6
BEEF STEAK 109 JAN 79 18
BEEF BURGER 110 FEB 79 18

```

```

>RUN
ENTER THE DATE (MONTH, DAY)
JUL,15,1979
SHALL I PRINT ALL ENTRIES
(Y OR N)
ENTER THE ITEM CODE TO
PRINT TODAY'S DATE: JUN 1 1983

```


SUPERMARKET LIST

Description

This program assists the homemaker by producing a grocery shopping list that is listed by categories to facilitate fast and efficient shopping.

Functions of the Program

The program begins by initializing the seven major food categories provided. Additional categories can be added easily, if desired. Prior to the printing of the grocery list, all data items are read and validated for accuracy. The major processing area of the program cycles through the data (once for each food category) and produces the formatted listing.

Instructions for Use

Data statements must be provided to the program prior to running it.

Data Entry

All data is entered using DATA statements.

Data Format

The format of the grocery list items is:

Food category code, Item description, Quantity

Note the END data record.

Output Description

See example provided.

```
10 CALL CLEAR
20 REM SUPERMARKET LIST
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 DIM T$(7)
60 M1=7
70 T$(1)="M"
80 N$(1)="MEAT"
90 T$(2)="FF"
100 N$(2)="FRESH FRUIT"
110 T$(3)="CF"
120 N$(3)="CANNED FRUIT"
130 T$(4)="FV"
140 N$(4)="FRESH VEGETABLES"
150 T$(5)="CV"
160 N$(5)="CANNED VEGETABLES"
170 T$(6)="D"
180 N$(6)="DAIRY PRODUCTS"
190 T$(7)="Q"
200 N$(7)="OTHER"
210 REM ***** CHECK FOR DATA ACCURACY *****
220 FOR I=1 TO M
230 READ T1$
240 IF T1$="END" THEN 310
250 READ I$,Q$
260 FOR J=1 TO M1
270 IF T1$=T$(J) THEN 300
```

```

280 NEXT J
290 PRINT "FOOD TYPE FOR ITEM #";I;" ";I$;" IS NOT RECOGNIZED"
300 NEXT I
310 PRINT "SHALL I CONTINUE ( Y OR N)"
320 INPUT A$
330 IF A$="N" THEN 500
340 RESTORE
350 REM ***** PROCESSING AREA *****
360 FOR I=1 TO M1
370 PRINT
380 PRINT
390 PRINT " ";N$(I)
400 PRINT "-----"
410 FOR J=1 TO M
420 READ T1$
430 IF T1$="END" THEN 480
440 READ I$,Q$
450 IF T1$<>T$(I) THEN 470
460 PRINT Q$;TAB(11);I$
470 NEXT J
480 RESTORE
490 NEXT I
500 REM ***** PROGRAM TERMINATION POINT *****
510 PRINT
520 PRINT
530 STOP
540 REM ***** DATA ENTRIES FOLLOW *****
550 DATA M,STEAK,1 LARGE
560 DATA D,MILK,5 GALS
570 DATA FF,APPLES,1 BAG
580 DATA CV,GREEN BEANS,2 CANS
590 DATA CV,YELLOW BEANS,1 CAN
600 DATA CF,PEACHES,1 CAN
610 DATA FF,PEARS,1/2 DOZEN
620 DATA O,DOG FOOD,BAG
630 DATA DAIRY,BUTTER,1 POUND
640 DATA END

```

```

RUN
FOOD TYPE FOR ITEM # 9 BUTTER IS NOT RECOGNIZED
SHALL I CONTINUE ( Y OR N)
? Y

```

MEAT

1 LARGE STEAK

FRESH FRUIT

1 BAG APPLES
1/2 DOZEN PEARS

CANNED FRUIT

1 CAN PEACHES

FRESH VEGETABLES

CANNED VEGETABLES

2 CANS GREEN BEANS
1 CAN YELLOW BEANS

DAIRY PRODUCTS

5 GALS MILK

OTHER

BAG DOG FOOD

MAJOR SYMBOL TABLE - SUPERMARKET LIST

I	-----I
I NAME	.. DESCRIPTION
I	-----I
I M	.. MAXIMUM NUMBER OF DATA READS
I T\$()	.. MASTER CATEGORY CODE ARRAY
I N\$()	.. MASTER CATEGORY DESCRIPTION ARRAY
I M1	.. NUMBER OF CATEGORIES
I T1\$	.. TRANSACTION CODE
I I\$	.. TRANSACTION DESCRIPTION
I Q\$	.. TRANSACTION QUANTITY
I	-----I

FUNCTIONS USED

I	-----I
I NAME	.. DESCRIPTION
I	-----I
I TAB	.. FORMATS PRINT LINES
I DIM	.. SINGLE DIMENSION ARRAYS
I	-----I

4

Scheduling Programs for Home Use

TV Scheduling

Reminder Calendar—Basic Version

Reminder Calendar—Extended Version

Job Jar

Chores

Lawn/Plant Care

TV SCHEDULING

Description

This program eliminates difficulties arising from family television viewing conflicts. It produces a weekly schedule that details the time, channel, and person scheduled to view a particular television show.

Functions of the Program

This program has several subroutines. Each is designed to perform a specific printing function. If extensions are desired, they should be relatively easy to accomplish by changing the individual routines. The program reads the scheduled items from DATA statements, determines their placement in the schedule, and then prints the schedule for the week.

Instructions for Use

Provide all individual schedule items prior to running the program. Priority in scheduling is given to the last entry read. Note the method used to indicate time: At 1200, the counter moves to 0030.

Data Entry

All data is entered using DATA statements.

Data Format

All data is entered using a single format:

Person, Day of the week, Start time, Stop time, Channel number

Note the END data record.

Output Description

See example provided. Output is printed for seven days.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM TELEVISION SCHEDULE PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=B"
60 REM ***** ENTRY OF START/STOP TIMES *****
70 PRINT "ENTER STARTING TIME FOR THE":"SCHEDULE I.E., 430"
80 INPUT TO
90 PRINT "ENTER STOPPING TIME FOR THE":"SCHEDULE I.E., 1130"
100 INPUT T1
110 REM ***** DATA INITIALIZATION *****
120 M0=2
130 M1=7
140 DIM D0$(7)
150 DIM C1$(7)
160 DIM N1$(7)
170 FOR I=1 TO 7
```

```

180 N1$(I)=" "
190 C1$(I)=" "
200 NEXT I
210 DIM NO$(7)
220 DO$(1)="SUN"
230 DO$(2)="MON"
240 DO$(3)="TUE"
250 DO$(4)="WED"
260 DO$(5)="THU"
270 DO$(6)="FRI"
280 DO$(7)="SAT"
290 REM ***** PROCESSING LOOP *****
300 GOSUB 720
310 XO=TO
320 X1=XO-100*(INT(XO/100))
330 IF X1<60 THEN 350
340 XO=XO+100-X1
350 IF INT(XO/100)>=10 THEN 370
360 PRINT #1:" ";
370 PRINT #1:XO;
380 GOSUB 790
390 REM ***** CHECKS SCHEDULE ENTRIES FOR TIME *****
400 FOR J=1 TO 336
410 READ N$,D1$,S0,S1,C0$
420 IF N$="END" THEN 510
430 IF S0>XO THEN 500
440 IF S1<=XO THEN 500
450 FOR K=1 TO 7
460 IF D1$(>)DO$(K) THEN 490
470 N1$(K)=N$
480 C1$(K)=C0$
490 NEXT K
500 NEXT J
510 GOSUB 870
520 REM ***** PRINTS SCHEDULE ENTRIES *****
530 PRINT #1:"          I";
540 FOR K=1 TO 7
550 PRINT #1:" ";N1$(K);" ";
560 REM
570 REM
580 PRINT #1:C1$(K);" I";
590 N1$(K)=" "
600 C1$(K)=" "
610 NEXT K
620 PRINT #1:
630 GOSUB 870
640 RESTORE
650 XO=XO+30
660 IF XO<T1+1 THEN 320
670 REM ***** PROGRAM TERMINATION POINT *****
680 PRINT #1:" ";
690 GOSUB 790
700 STOP
710 REM ***** SUBROUTINES FOLLOW *****
720 REM ***** PRINT HEADINGS *****
730 PRINT #1:" ";
740 FOR I=1 TO M1
750 PRINT #1:" ";DO$(I);" ";
760 NEXT I
770 PRINT #1:
780 RETURN
790 REM ***** PRINTS SCHEDULE OUTLINE *****
800 PRINT #1:" ";
810 FOR I=1 TO M1
820 PRINT #1:"I-----";
830 NEXT I
840 PRINT #1:"I"
850 RETURN
860 REM ***** VERTICAL LINES *****
870 PRINT #1:" ";

```



```

880 FOR I=1 TO M1
890 PRINT #1:"I      ";
900 NEXT I
910 PRINT #1:"I"
920 RETURN
930 REM ***** DATA ENTRIES FOLLOW *****
940 DATA BOB,TUE,1000,1100,9
950 DATA CHUC,WED,930,1000,7
960 DATA DAD,SAT,930,1100,7
970 DATA RIK,FRI,1030,1100,7
980 DATA MOM,WED,930,1000,9
990 DATA END,X,0,0,0
1000 CLOSE #1

```

```

>RUN
ENTER STARTING TIME FOR THE
SCHEDULE I.E., 430
ENTER STOPPING TIME FOR THE
SCHEDULE I.E., 1130

```

	SUN	MON	TUE	WED	THU	FRI	SAT
930	I	I	I	I	I	I	I
	I	I	I	I MOM 9	I	I	I DAD 7
1000	I	I	I	I	I	I	I
	I	I	I BOB 9	I	I	I	I DAD 7
1030	I	I	I	I	I	I	I
	I	I	I BOB 9	I	I	I RIK 7	I DAD 7
1100	I	I	I	I	I	I	I
	I	I	I	I	I	I	I
1130	I	I	I	I	I	I	I
	I	I	I	I	I	I	I

MAJOR SYMBOL TABLE - TV SCHEDULING

I	NAME	.. DESCRIPTION	I
I	TO	.. SCHEDULE START TIME	I
I	T1	.. SCHEDULE STOP TIME	I
I	DO\$()	.. DAYS OF WEEK ARRAY	I
I	C1()	.. CHANNEL PRINT ARRAY	I
I	N1\$()	.. NAME PRINT ARRAY	I
I	X0	.. TIME INCREMENT COUNTER	I
I	N\$	.. NAME	I
I	D1\$	.. DAY OF WEEK	I
I	SO	.. START TIME OF SHOW	I
I	S1	.. STOP TIME OF SHOW	I
I	CO	.. CHANNEL	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	GOSUB	.. BRANCHES TO AND RETURNS	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

REMINDER CALENDAR – BASIC VERSION

Description

This program produces a simple reminder calendar for the busy individual or family. The items are printed in abbreviated form on the calendar, and a detailed list is printed upon request.

Functions of the Program

The program prints, for the month selected, a calendar and list of the items scheduled. Most program functions are executed using subroutines to facilitate extensions or modifications to the basic listing. The major processing loop occurs in lines 210-420. All functions occurring after the termination point are performed using GOSUBs.

Instructions for Use

All scheduled items must be entered prior to running the program.

Data Entry

All data items are entered using DATA statements.

Data Formats

There are two data formats used by the program:

1. The master month record is entered as the first item:
Month name, Days in month, Day of week that month starts on
2. Schedule items are provided in the following format:
Month, Day, Abbreviated description, Description

Output Description

See example provided. The program produces a calendar and a detailed print of the scheduled items.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM      REMINDER SCHEDULE - BASIC
30 REM      ***** OPEN STATEMENT FOR PRINTER *****
40 REM      *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=8"
60 REM      ***** DATA INITIALIZATION *****
70 SO=0
80 LO=0
90 M1=7
100 M2=6
110 DIM D6$(7)
120 DIM D7(7)
130 DIM DO$(7)
140 DO$(1)="SUN"
150 DO$(2)="MON"
160 DO$(3)="TUE"
170 DO$(4)="WED"
```

```

180 DO$(5)="THU"
190 DO$(6)="FRI"
200 DO$(7)="SAT"
210 FOR I=1 TO 7
220 D6$(I)="      "
230 NEXT I
240 REM ***** PROCESSING LOOP *****
250 READ M$,D,D1$
260 FOR K=1 TO 7
270 IF D1$<>DO$(K)THEN 290
280 SO=K
290 NEXT K
300 IF SO=0 THEN 510
310 GOSUB 520
320 FOR J=1 TO M2
330 GOSUB 590
340 FOR K=1 TO 7
350 N1$(K)="      "
360 NEXT K
370 IF D<=IO THEN 460
380 GOSUB 650
390 FOR L=1 TO 10
400 GOSUB 980
410 IF L1=0 THEN 450
420 GOSUB 870
430 LO=LO+1
440 NEXT L
450 NEXT J
460 REM ***** PROGRAM TERMINATION POINT *****
470 PRINT "SHALL I PRINT THE SCHEDULED ITEMS ( Y OR N )?"
480 INPUT A$
490 IF A$<>"Y" THEN 510
500 GOSUB 1170
510 STOP
520 REM ***** PRINTS HEADINGS *****
530 PRINT #1:" ";TAB(38);M$
540 FOR I=1 TO 7
550 PRINT #1:" ";DO$(I);" ";
560 NEXT I
570 PRINT #1
580 RETURN
590 REM ***** PRINTS SCHEDULE OUTLINE *****
600 FOR I=1 TO M1
610 PRINT #1:"I-----";
620 NEXT I
630 PRINT #1:"I"
640 RETURN
650 REM ***** PRINTS CALENDER DAY LINE *****
660 FOR I=1 TO M1
670 IF J<>1 THEN 700
680 IF I<>SO THEN 700
690 IO=1
700 IF D>=IO THEN 740
710 PRINT #1:"I ";
720 IO=IO+1
730 GOTO 830
740 IF IO>9 THEN 810
750 IF IO<>0 THEN 780
760 PRINT #1:"I ";
770 GOTO 830
780 PRINT #1:"I ";IO;" ";
790 IO=IO+1
800 GOTO 830
810 PRINT #1:"I ";IO;" ";
820 IO=IO+1
830 NEXT I
840 PRINT #1:"I"
850 LO=0
860 RETURN
870 REM ***** VERTICAL LINES *****

```

```

880 FOR I=1 TO M1
890 IF D6$(I)="" THEN 940
900 PRINT #1:"I ";D6$(I);" ";
910 D6$(I)=""
920 D7(I)=0
930 GOTO 950
940 PRINT #1:"I ";
950 NEXT I
960 PRINT #1:"I"
970 RETURN
980 REM ***** REVIEWS SCHEDULE ITEMS *****
990 RESTORE
1000 L1=0
1010 READ M$,D,D1$
1020 FOR I=1 TO 100
1030 READ M3$,D3,D4$,D5$
1040 IF M3$="END" THEN 1160
1050 IF D3>D THEN 1150
1060 IF M3$<>M$ THEN 1150
1070 IF D3>=I0 THEN 1150
1080 IF D3<I0-7 THEN 1150
1090 I1=D3-I0+8
1100 D7(I1)=D7(I1)+1
1110 IF D7(I1)<=L0 THEN 1150
1120 IF D6$(I1)<>" " THEN 1150
1130 D6$(I1)=D4$
1140 L1=1
1150 NEXT I
1160 RETURN
1170 REM ***** DETAILED PRINT OF SCHEDULE *****
1180 PRINT #1
1190 PRINT #1:M$
1200 RESTORE
1210 READ M$,D,D1$
1220 FOR I=1 TO 100
1230 READ M3$,D3,D4$,D5$
1240 IF M3$="END" THEN 1290
1250 IF D3>D THEN 1280
1260 IF M3$<>M$ THEN 1280
1270 PRINT #1:D3,D4$,D5$
1280 NEXT I
1290 RETURN
1300 REM ***** DATA ENTRIES FOLLOW *****
1310 REM **** NOTE ABBREVIATED DESCRIPTION MUST BE IN QUOTES ****
1320 REM **** AND 7 CHARACTERS LONG ****
1330 DATA JAN,31,MON
1340 DATA JAN,1,"DOCTOR ",APPOINTMENT FOR PHYSICAL
1350 DATA JAN,2,DENTIST,3 PM APPOINTMENT FOR CLEANING
1360 DATA JAN,31,"B-DAY ",KENNY'S BIRTHDAY
1370 DATA JAN,99,NOTE,VISIT FARM DURING THIS MONTH
1380 DATA JAN,9,"CAR ",REPAIR OF MOTOR
1390 DATA JAN,2,"SCHOOL ",PTA MEETING 7 PM
1400 DATA END,0,
1410 CLOSE #1

```

>RUN

SUN	MON	TUE	JAN WED	THU	FRI	SAT
I	I	I	I	I	I	I
I	I 1	I 2	I 3	I 4	I 5	I 6
I	I DOCTOR	I DENTIST	I	I	I	I
I	I	I SCHOOL	I	I	I	I
I	I	I	I	I	I	I
I 7	I 8	I 9	I 10	I 11	I 12	I 13
I	I	I CAR	I	I	I	I
I	I	I	I	I	I	I
I 14	I 15	I 16	I 17	I 18	I 19	I 20
I	I	I	I	I	I	I
I 21	I 22	I 23	I 24	I 25	I 26	I 27
I	I	I	I	I	I	I
I 28	I 29	I 30	I 31	I	I	I
I	I	I	I B-DAY	I	I	I
I	I	I	I	I	I	I

SHALL I PRINT THE SCHEDULED ITEMS (Y OR N)?

? Y

JAN

1	DOCTOR	APPOINTMENT FOR PHYSICAL
2	DENTIST	3 PM APPOINTMENT FOR CLEANING
31	B-DAY	KENNY'S BIRTHDAY
9	CAR	REPAIR OF MOTOR
2	SCHOOL	PTA MEETING 7 PM

MAJOR SYMBOL TABLE - REMINDER

I	I	I
I	I NAME .. DESCRIPTION	I
I	I	I
I	I S0 .. POINTER TO DAY OF WEEK	I
I	I D0\$() .. DAY OF WEEK	I
I	I D6\$() .. OUTPUT ARRAY	I
I	I M\$.. DAY OF WEEK IN	I
I	I D .. DAY IN	I
I	I D1\$.. DAY OF WEEK IN	I
I	I IO .. DAY OF MONTH COUNTER	I
I	I D7() .. OUTPUT ARRAY FOR COUNT	I
I	I M3\$.. MONTH IN	I
I	I D3 .. DAY IN	I
I	I D4\$.. ITEM IN	I
I	I D5\$.. ITEM DESCRIPTION IN	I
I	I	I

FUNCTIONS USED

I	I	I
I	I NAME .. DESCRIPTION	I
I	I	I
I	I GOSUB .. BRANCH TO AND RETURN	I
I	I DIM .. SINGLE DIMENSION ARRAY	I
I	I	I

REMINDER CALENDAR – EXTENDED VERSION

Description

This program is a useful assistant for the busy individual or family. It produces a reminder calendar for as many months in advance as are desired.

Functions of the Program

This program functions in a similar way to the basic reminder program given previously. There are, however, several major enhancements:

1. This program produces the calendars for the number of months specified.
2. The calendars are printed either continuously or with page alignment.
3. The calendars can be either condensed or expanded (to allow for "write-ins").
4. Month names and the number of days in each month are initialized for you.

Instructions for Use

Record your schedule items and enter them prior to running the program for the month that they are scheduled in.

Data Entry

All data is entered using DATA statements.

Data Format

One data form is required. Scheduled items are entered in the following form:

Month, Day, Abbreviated description, Description

Output Description

See example provided. The printed results will include individual prints for each of the months requested. Page alignment is allowed, if requested.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM ***** OPEN STATEMENT FOR PRINTER *****
30 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
40 OPEN #1:"RS232.BA=9600.DA=8"
50 REM REMINDER SCHEDULE AND CALENDAR - ENHANCED
60 REM ***** DATA INITIALIZATION *****
70 N=0
80 SO=0
90 LO=0
100 M1=7
```

```

110 M2=7
120 M4=1
130 DIM D6$(7)
140 DIM D7(7)
150 DIM DO$(7)
160 DIM NO(12)
170 DIM MO$(12)
180 READ DO$(1),DO$(2),DO$(3),DO$(4),DO$(5),DO$(6),DO$(7)
190 FOR I=1 TO 12
200 READ MO$(I),NO(I)
210 NEXT I
220 FOR I=1 TO 7
230 D6$(I)="      "
240 NEXT I
250 PRINT "ENTER THE FIRST MONTH AND":"YEAR TO BE PRINTED I.E., ":"JAN,1980"
260 INPUT M$,Y1
270 PRINT "ENTER THE DAY OF THE WEEK":"THAT THE FIRST MONTH STARTS":"ON"
280 INPUT D1$
290 PRINT "ENTER THE NUMBER OF MONTHS":"TO BE PRINTED I.E., 10"
300 INPUT N
310 PRINT "SHALL I PRINT THE SCHEDULED":"ITEMS (Y OR N)?"
320 INPUT A$
330 PRINT "DO YOU WANT PAGE ALIGNMENT":"(Y OR N)?"
340 INPUT A1$
350 PRINT "DO YOU WANT AN EXPANDED":"CALENDAR (Y OR N)?"
360 INPUT A2$
370 IF A1$<>"Y" THEN 400
380 PRINT "BEFORE THE PRINTING OF EACH":"MONTH A '?' WILL APPEAR"
390 PRINT "ALIGN TO THE TOP OF PAGE":"BEFORE PRESSING ENTER"
400 FOR I=1 TO 12
410 IF M$<>MO$(I) THEN 430
420 M4=I
430 NEXT I
440 FOR K=1 TO 7
450 IF D1$<>DO$(K) THEN 470
460 SO=K
470 NEXT K
480 REM ***** PROCESSING LOOP *****
490 FOR I2=M4 TO M4+N-1
500 NO(2)=28
510 Y=Y1
520 IF INT(Y/4)<>Y/4 THEN 540
530 NO(2)=29
540 IO=0
550 M3=12
560 IF M3<=12 THEN 620
570 M3=M3-12
580 Y=Y1+1
590 IF INT(Y/4)<>Y/4 THEN 610
600 NO(2)=29
610 GOTO 560
620 IF SO=0 THEN 850
630 GOSUB 890
640 FOR J=1 TO M2
650 GOSUB 990
660 FOR K=1 TO 7
670 N1$(K)="      "
680 NEXT K
690 IF NO(M3)<IO THEN 820
700 GOSUB 1050
710 FOR L=1 TO 10
720 GOSUB 1420
730 IF L<>0 THEN 780
740 IF A2$<>"Y" THEN 810
750 GOSUB 1310
760 GOSUB 1310
770 GOTO 810
780 GOSUB 1310
790 LO=L0+1
800 NEXT L

```

```

810 NEXT J
820 REM ***** PROGRAM TERMINATION POINT *****
830 IF A$<>"Y" THEN 850
840 GOSUB 1630
850 IF S0<>8 THEN 870
860 S0=1
870 NEXT I2
880 STOP
890 REM ***** PRINTS HEADINGS *****
900 IF A1$<>"Y" THEN 920
910 INPUT X$
920 PRINT #1
930 PRINT #1: TAB(34); MO$(M3); " "; Y
940 FOR I=1 TO 7
950 PRINT #1: " "; DO$(I); " ";
960 NEXT I
970 PRINT #1
980 RETURN
990 REM ***** PRINTS SCHEDULE OUTLINE *****
1000 FOR I=1 TO M1
1010 PRINT #1: "I-----";
1020 NEXT I
1030 PRINT #1: "I"
1040 RETURN
1050 REM ***** PRINTS CALENDAR DAY LINE *****
1060 FOR I=1 TO M1
1070 IF J<>1 THEN 1100
1080 IF I<>S0 THEN 1100
1090 IO=1
1100 IF NO(M3)>=IO THEN 1140
1110 PRINT #1: "I ";
1120 IO=IO+1
1130 GOTO 1260
1140 IF IO>9 THEN 1220
1150 IF IO<>0 THEN 1180
1160 PRINT #1: "I ";
1170 GOTO 1260
1180 PRINT #1: "I "; IO; " ";
1190 IO=IO+1
1200 S1=I+1
1210 GOTO 1260
1220 PRINT #1: "I "; IO; " ";
1230 S1=I+1
1240 IO=IO+1
1250 S0=I+1
1260 NEXT I
1270 PRINT #1: "I"
1280 L0=0
1290 S0=S1
1300 RETURN
1310 REM ***** VERTICAL LINES *****
1320 FOR I=1 TO M1
1330 IF D6$(I)=" " THEN 1380
1340 PRINT #1: "I "; D6$(I); " ";
1350 D6$(I)=" "
1360 D7(I)=0
1370 GOTO 1390
1380 PRINT #1: "I ";
1390 NEXT I
1400 PRINT #1: "I"
1410 RETURN
1420 REM ***** REVIEWS SCHEDULED ITEMS *****
1430 RESTORE
1440 L1=0
1450 FOR I=1 TO 31
1460 READ X$
1470 NEXT I
1480 FOR I=1 TO 100
1490 READ M3$, D3, D4$, D5$
1500 IF M3$="END" THEN 1620

```



```

1510 IF D3>NO(M3) THEN 1610
1520 IF M3$<>M0$(M3) THEN 1610
1530 IF D2>=10 THEN 1610
1540 IF D3<10-7 THEN 1610
1550 I1=D3-I0+B
1560 D7(I1)=1+D7(I1)
1570 IF D7(I1)<=LO THEN 1610
1580 IF D6$(I1)<>" " THEN 1610
1590 D6$(I1)=D4$
1600 L1=1
1610 NEXT I
1620 RETURN
1630 REM ***** DETAILED PRINT OF SCHEDULE *****
1640 PRINT #1:
1650 PRINT #1:M0$(M3)
1660 RESTORE
1670 FOR I=1 TO 31
1680 READ X$
1690 NEXT I
1700 FOR I=1 TO 100
1710 READ M3$,D3,D4$,D5$
1720 IF M3$="END" THEN 1760
1730 IF M3$<>M0$(M3) THEN 1750
1740 PRINT #1:D3,D4$,D5$
1750 NEXT I
1760 RETURN
1770 REM ***** DATA FOR INITIALIZATION *****
1780 DATA SUN,MON,TUE,WED,THU,FRI,SAT
1790 DATA JAN,31,FEB,28,MAR,31,APR,30,MAY,31,JUN,30
1800 DATA JUL,31,AUG,31,SEP,30,OCT,31,NOV,30,DEC,31
1810 REM ***** DATA ENTRIES FOLLOW *****
1820 DATA JAN,1,"DOCTOR ",APPOINTMENT FOR PHYSICAL
1830 DATA JAN,2,"DENTIST",3 PM APPOINTMENT DOCTOR SMITH
1840 DATA JAN,2,"SCHOOL ",PTA MEETING 7 PM
1850 DATA FEB,25,"B-DAY ",KENNY'S BIRTHDAY
1860 DATA JAN,99,"NOTE ",NEXT MONTH VISIT FARM
1870 DATA END,0,0,0
1880 CLOSE #1

```

```

>RUN
ENTER THE FIRST MONTH AND
YEAR TO BE PRINTED I.E.,
JAN,1980
? JAN 1980
ENTER THE DAY OF THE WEEK
THAT THE FIRST MONTH STARTS
ON
? TUE
ENTER THE NUMBER OF MONTHS
TO BE PRINTED I.E., 10
? 1
SHALL I PRINT THE SCHEDULED
ITEMS (Y OR N)?
? Y
DO YOU WANT PAGE ALIGNMENT
(Y OR N)?
? Y
DO YOU WANT AN EXPANDED
CALENDAR (Y OR N)?
? Y
BEFORE THE PRINTING OF EACH
MONTH A '?' WILL APPEAR
ALIGN TO THE TOP OF PAGE
BEFORE PRESSING ENTER
?

```


JOB JAR

Description

The traditional jar of household tasks that is used to occupy idle moments is automated by this program. Odd jobs that we never seem to find the time for are placed in the computer job jar for future reference. Later, when you have free time, the computer will randomly choose one to fill that idle moment. It's a sure way of taking care of annoying household duties. Peeking is not allowed.

Functions of the Program

The program randomly selects an item from the data items supplied that meets the time availability specified.

Instructions for Use

New jobs that are to be added to the jar are entered by means of DATA statements. Completed jobs should be deleted from the data list at time of accomplishment.

Data Entry

All data is entered using DATA statements.

Data Format

Tasks are entered using the following format:

Job name/description, Estimated time to complete

Output Description

See example provided.

```
10 CALL CLEAR
20 REM HOUSEHOLD CHORE JOB-JAR PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 MO=99
50 Y=1
60 N=0
70 P=0
80 PRINT "WOULD YOU LIKE TO REVIEW THE": "JOBS AVAILABLE (Y OR N)?"
90 INPUT A$
100 IF A$<>"Y" THEN 170
110 PRINT
120 PRINT
130 SO=1
140 GOSUB 380
150 SO=0
160 N=0
170 PRINT "DO YOU HAVE A TIME LIMIT": "(Y OR N)?"
180 INPUT A$
190 IF A$="N" THEN 220
200 PRINT "ENTER THE MAXIMUM TIME": "AVAILABLE (IN HOURS)"
210 INPUT MO
220 REM ***** PROCESSING AREA *****
230 GOSUB 380
240 IF N<>0 THEN 270
```


MAJOR SYMBOL TABLE - JOB-JAR

I-----I			
I	NAME	.. DESCRIPTION	I
I-----I			
I	Y	.. SEED FOR RANDOM NUMBER GENERATOR	I
I	P	.. COUNTER FOR NUMBER OF PASSES	I
I	N	.. NUMBER OF JOBS AVAILABLE	I
I	M0	.. AVAILABLE TIME	I
I	Z	.. GENERATED RANDOM NUMBER	I
I	N1	.. RECORD NUMBER	I
I	T1	.. TIME OF JOB IN	I
I	T0\$	.. DESCRIPTION OF JOB IN	I
I-----I			

FUNCTIONS USED

I-----I			
I	NAME	.. DESCRIPTION	I
I-----I			
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	RND	.. GENERATES A RANDOM NUMBER	I
I	GOSUB	.. BRANCHES TO AND RETURNS	I
I-----I			

CHORES

Description

The computer becomes the perfect arbitrator of the question, "Whose turn is it to do the dishes?" This program produces a weekly schedule of all chores and individuals responsible for each.

Functions of the Program

This program accepts a cycle number from the keyboard and schedules the next person to perform each chore, a schedule based upon an equal sharing by all individuals eligible for the task. Consecutive cycle numbers must be used to insure equitable scheduling. Tasks are entered as either the responsibility of one person or the responsibility of all. The schedule is produced, and a checklist is provided, for a week at a time.

Instructions for Use

Determine the tasks that are required, the days of the week that they are to be accomplished on, and the individuals eligible to be scheduled for that task.

Data Entry

All data is entered by means of DATA statements except for the current cycle number.

Data Formats

Two formats are available:

1. Tasks are identified by the following format:

Task type, Task name,

Y or N (for each of the seven days of the week, Sunday first)

A Y (yes) entry for a day indicates that the task is to be performed on that day. For example: Y, N, N, Y, N, N, Y indicates that the task is to be performed on Sunday, Wednesday, and Saturday. Task types are either "*" or "A." The "*" indicates that the task is to be shared by the individuals following the item. The "A" indicates that the task is to be performed by all individuals. See example.

2. Following each task record, a list of the individuals is provided in the following form:

N, Name of the individual

Output Description

See example provided. The results are printed for one week at a time.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```

10 CALL CLEAR
20 REM   HOUSEHOLD CHORES - BASIC
30 REM   ***** OPEN STATEMENT FOR PRINTER *****
40 REM   *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=B"
60 REM PRINT #1:">RUN"
70 REM   ***** DATA INITIALIZATION *****
80 M1=7
90 DIM N$(10)
100 DIM D$(7)
110 D$(1)="SUN"
120 D$(2)="MON"
130 D$(3)="TUE"
140 D$(4)="WED"
150 D$(5)="THU"
160 D$(6)="FRI"
170 D$(7)="SAT"
180 X$="   "
190 PRINT "SPACE TO TOP OF PAGE"
200 INPUT B$
210 PRINT "ENTER CURRENT CYCLE NUMBER"
220 INPUT Y
230 Y=Y-1
240 IF Y<0 THEN 210
250 PRINT #1
260 REM   ***** PROCESSING LOOP *****
270 GOSUB 550
280 GOSUB 620
290 GOSUB 690
300 FOR I=1 TO 25
310 IF T$="END" THEN 530
320 T1$=T$
330 READ C$,D$(1),D$(2),D$(3),D$(4),D$(5),D$(6),D$(7)
340 GOSUB 690
350 PRINT #1
360 PRINT #1:C$;
370 IF T1$<>"A" THEN 410
380 S=1
390 N=K1
400 GOTO 430
410 N=Y-K1*INT(Y/K1)+1
420 S=N
430 FOR J=S TO N
440 FOR L=1 TO 7
450 IF D$(L)<>"Y" THEN 470
460 PRINT #1:TAB(L*9);" (";N$(J);
470 NEXT L
480 PRINT #1
490 NEXT J
500 PRINT #1
510 GOSUB 620
520 NEXT I
530 REM   ***** PROGRAM TERMINATION POINT *****
540 STOP
550 REM   ***** PRINTS HEADINGS *****
560 PRINT #1:X$;
570 FOR X=1 TO 7
580 PRINT #1:"   ";D$(X);"   ";
590 NEXT X
600 PRINT #1
610 RETURN
620 REM   ***** PRINTS SCHEDULE OUTLINE *****
630 PRINT #1:X$;
640 FOR X=1 TO M1
650 PRINT #1:"I-----";
660 NEXT X
670 PRINT #1:"I"
680 RETURN
690 REM   ***** DATA READ PROCEDURES *****
700 FOR K=1 TO 25

```

```

710 READ T$
720 IF T$<>"N" THEN 750
730 READ N$(K)
740 NEXT K
750 K1=K-1
760 RETURN
770 REM ***** DATA ENTRIES FOLLOW *****
780 DATA *,CHORE 1,Y,Y,Y,Y,Y,Y,Y
790 DATA N,JIM
800 DATA N,CHUCK
810 DATA N,MARY
820 DATA *,CHORE 2,Y,N,Y,N,Y,N,Y
830 DATA N,JUDY
840 DATA N,MARY
850 DATA A,CHORE 3,Y,Y,Y,Y,Y,Y,Y
860 DATA N,MARY
870 DATA N,JUDY
880 DATA N,JIM
890 DATA N,CHUCK
900 DATA *,CHORE 4,N,N,N,N,N,N,N,Y
910 DATA N,JUDY
920 DATA N,MARY
930 DATA N,JIM
940 DATA N,CHUCK
950 DATA END

```

```

>RUN
SPACE TO TOP OF PAGE
?
ENTER CURRENT CYCLE NUMBER
? 4

```

	SUN	MON	TUE	WED	THU	FRI	SAT
CHORE 1	()JIM	()JIM	()JIM	()JIM	()JIM	()JIM	()JIM
CHORE 2	()MARY		()MARY		()MARY		()MARY
CHORE 3	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK	()MARY ()JUDY ()JIM ()CHUCK
CHORE 4							()CHUCK

MAJOR SYMBOL TABLE - CHORES

I	NAME	..	DESCRIPTION	I
I	D\$()	..	ARRAY OF TASK INDICATORS	I
I	N\$()	..	NAME ARRAY	I
I	DO\$()	..	DAY OF WEEK ARRAY	I
I	Y	..	CYCLE NUMBER	I
I	T\$	..	TASK CODE	I
I	T1\$	..	TASK CODE	I
I	C\$	..	TASK NAME	I

FUNCTIONS USED

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	TAB .. FORMATS PRINT LINES	I
I	INT .. CONVERTS NUMBER TO INTEGER	I
I	GOSUB .. BRANCHES TO AND RETURNS	I
I	DIM .. SINGLE DIMENSION ARRAYS	I
I	-----	I

LAWN/PLANT CARE

Description

This gardener's assistant identifies and prints the scheduled daily and monthly gardening tasks for the specified times requested.

Functions of the Program

The program produces outputs of monthly calendars beginning with the specified month and continuing for the number of months requested. The major processing loop calls various subroutines to perform the formatted printing of the calendar. Note that the data is supplied in two sections. The first section identifies tasks that are scheduled for specific dates, and the second supplies tasks that are scheduled for the month only.

Instructions for Use

Enter scheduled items as data prior to running the program.

Data Entry

Data is entered by means of DATA statements.

Data Formats

1. Tasks that are scheduled for a specific date are entered as:
Month, Date, Abbreviated description, Extended description
2. Tasks that are identified for the month only are entered as:
Month, Task description

Output Description

See example provided.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM LAWN/CARE SCHEDULE PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=8"
60 REM ***** DATA INITIALIZATION *****
70 N=0
80 SO=0
90 LO=0
100 M1=7
110 M2=7
120 M4=1
130 DIM DO$(7)
140 DIM NO(12)
150 DIM MO$(12)
160 DIM D6$(7)
170 DIM D7(7)
180 READ DO$(1),DO$(2),DO$(3),DO$(4),DO$(5),DO$(6),DO$(7)
190 FOR I=1 TO 12
```

```

200 READ M0$(I),NO(I)
210 NEXT I
220 FOR I=1 TO 7
230 D6$(I)="      "
240 NEXT I
250 PRINT "ENTER THE FIRST MONTH AND":"YEAR TO BE PRINTED I.E., ":"JAN,1980"
260 INPUT M$,Y1
270 PRINT "ENTER THE DAY OF THE WEEK":"THAT THE FIRST MONTH STARTS":"ON"
280 INPUT D1$
290 PRINT "ENTER THE NUMBER OF MONTHS":"TO BE PRINTED I.E., 10"
300 INPUT N
310 PRINT "DO YOU WANT PAGE ALIGNMENT":"(Y OR N)?"
320 INPUT A1$
330 IF A1$<>"Y" THEN 360
340 PRINT "BEFORE THE PRINTING OF EACH":"MONTH A '?' WILL APPEAR"
350 PRINT "ALIGN TO THE TOP OF PAGE":"BEFORE PRESSING ENTER"
360 FOR I=1 TO 12
370 IF M$<>M0$(I) THEN 390
380 M4=I
390 NEXT I
400 FOR K=1 TO 7
410 IF D1$<>D0$(K) THEN 430
420 S0=K
430 NEXT K
440 REM ***** PROCESSING LOOP *****
450 FOR I2=M4 TO M4+N-1
460 NO(2)=28
470 Y=Y1
480 IF INT(Y/4)<>Y/4 THEN 500
490 NO(2)=29
500 IO=0
510 M3=I2
520 IF M3<=12 THEN 580
530 M3=M3-12
540 Y=Y1+1
550 IF INT(Y/4)<>Y/4 THEN 570
560 NO(2)=29
570 GOTO 520
580 IF S0=0 THEN 790
590 GOSUB 830
600 FOR J=1 TO M2
610 GOSUB 930
620 FOR K=1 TO 7
630 N1$(K)="      "
640 NEXT K
650 IF NO(M3)<IO THEN 770
660 GOSUB 990
670 FOR L=1 TO 10
680 GOSUB 1360
690 IF L1<>0 THEN 730
700 GOSUB 1250
710 GOSUB 1250
720 GOTO 760
730 GOSUB 1250
740 LO=LO+1
750 NEXT L
760 NEXT J
770 REM ***** PROGRAM TERMINATION POINT *****
780 GOSUB 1580
790 IF S0<>8 THEN 810
800 S0=1
810 NEXT I2
820 STOP
830 REM *****PRINTS HEADINGS *****
840 IF A1$<>"Y" THEN 860
850 INPUT X$
860 PRINT #1: TAB(26);M0$(M3);" ";Y
870 PRINT #1:
880 FOR I=1 TO 7
890 PRINT #1:"      ";D0$(I);" ";

```

```

900 NEXT I
910 PRINT #1:
920 RETURN
930 REM ***** PRINTS SCHEDULE OUTLINE *****
940 FOR I=1 TO M1
950 PRINT #1:"I-----";
960 NEXT I
970 PRINT #1:"I"
980 RETURN
990 REM ***** PRINTS CALENDAR DAY LINE *****
1000 FOR I=1 TO M1
1010 IF J<>1 THEN 1040
1020 IF I<>S0 THEN 1040
1030 IO=1
1040 IF NO(M3)>=IO THEN 1080
1050 PRINT #1:"I      ";
1060 IO=IO+1
1070 GOTO 1200
1080 IF IO>9 THEN 1160
1090 IF IO<>0 THEN 1120
1100 PRINT #1:"I      ";
1110 GOTO 1200
1120 PRINT #1:"I      ";IO;" ";
1130 IO=IO+1
1140 S1=I+1
1150 GOTO 1200
1160 PRINT #1:"I      ";IO;" ";
1170 S1=I+1
1180 IO=IO+1
1190 S0=I+1
1200 NEXT I
1210 PRINT #1:"I"
1220 L0=0
1230 S0=S1
1240 RETURN
1250 REM ***** VERTICAL LINES *****
1260 FOR I=1 TO M1
1270 IF D6$(I)="      " THEN 1320
1280 PRINT #1:"I ";D6$(I);" ";
1290 D6$(I)="      "
1300 D7(I)=0
1310 GOTO 1330
1320 PRINT #1:"I      ";
1330 NEXT I
1340 PRINT #1:"I"
1350 RETURN
1360 REM ***** REVIEWS SCHEDULE ITEMS *****
1370 RESTORE
1380 L1=0
1390 FOR I=1 TO 31
1400 READ X$
1410 NEXT I
1420 FOR I=1 TO 100
1430 READ M3$
1440 IF M3$="END" THEN 1570
1450 READ D3,D4$,D5$
1460 IF D3>NO(M3) THEN 1560
1470 IF M3$<>M0$(M3) THEN 1560
1480 IF D3>=IO THEN 1560
1490 IF D3<IO-7 THEN 1560
1500 I1=D3-IO+8
1510 D7(I1)=1+D7(I1)
1520 IF D7(I1)<=L0 THEN 1560
1530 IF D6$(I1)<>"      " THEN 1560
1540 D6$(I1)=D4$
1550 L1=1
1560 NEXT I
1570 RETURN
1580 REM ***** DETAILED PRINT OF SCHEDULE *****
1590 PRINT #1:

```

```

1600 PRINT #1:M0$(M3)
1610 RESTORE
1620 FOR I=1 TO 31
1630 READ X$
1640 NEXT I
1650 FOR I=1 TO 100
1660 READ M3$
1670 IF M3$="END" THEN 1720
1680 READ D3,D4$,D5$
1690 IF M3$(<>M0$(M3))THEN 1710
1700 PRINT #1:D3,D4$,D5$
1710 NEXT I
1720 PRINT #1:
1730 PRINT #1:"      MONTH'S TASKS "
1740 FOR I=1 TO 100
1750 READ M3$
1760 IF M3$="END" THEN 1810
1770 READ D5$
1780 IF M3$(<>M0$(M3))THEN 1800
1790 PRINT #1:D5$
1800 NEXT I
1810 RETURN
1820 REM ***** DATA FOR INITIALIZATION *****
1830 DATA SUN,MON,TUE,WED,THU,FRI,SAT
1840 DATA JAN,31,FEB,28,MAR,31,APR,30,MAY,31,JUN,30
1850 DATA JUL,31,AUG,31,SEP,30,OCT,31,NOV,30,DEC,31
1860 REM ***** DATA ENTREIS FOLLOW *****
1870 DATA APR,15,"GARDEN ",PREPARE FOR PLANTING
1880 DATA APR,20,"SELECT ",CHOOSE SEEDS TO PLANT
1890 DATA APR,25," PLANT ",PLANT CARROTS
1900 DATA APR,30," PLANT ",PLANT ONIONS
1910 DATA MAY,15," PLANT ",PLANT TOMATO PLANTS
1920 DATA END
1930 REM ***** MONTH'S TASKS FOLLOW *****
1940 DATA APR,SEED LAWN
1950 DATA MAY,FERTILIZE YARD
1960 DATA APR,ROLL LAWN
1970 DATA END
1980 CLOSE #1

```

```

>RUN
ENTER THE FIRST MONTH AND
YEAR TO BE PRINTED I.E.,
JAN,1980
? APR, 1983
ENTER THE DAY OF THE WEEK
THAT THE FIRST MONTH STARTS
ON
? FRI
ENTER THE NUMBER OF MONTHS
TO BE PRINTED I.E., 10
? 1
DO YOU WANT PAGE ALIGNMENT
(Y OR N)?
? N

```


5

List Programs for Every Purpose

Christmas Cards
Addresses—Version 1
Addresses—Version 2
Addresses—Version 3
Record Lists
Record Search
Reference Filing
Music Collections
Coin Collections
Coin Investments
Beer Can Collection
Book Collections
Service Calls
Recording Tapes
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Table of Contents

CHRISTMAS CARDS

Description

This program records addresses for Christmas cards and letters and identifies those that have been sent or received.

Functions of the Program

The program reads names, addresses, and sent/received indicators and then prints a formatted listing for use in addressing and mailing your Christmas cards.

Instructions for Use

Enter your Christmas card list prior to running the program. Maintain the data entries for use in determining next year's mailing requirements, adding and deleting from the list as necessary.

Data Entry

All data is entered by means of DATA statements.

Data Format

The data is formatted as follows:

Name, Street address, City, State, Zip, Sent, Received

Output Description

See example provided.

Comments

You may not wish to use the sent/received portion of the program. This function can be eliminated easily from the program (check lines 140, 150, and 220-260).

```
10 CALL CLEAR
20 REM CHRISTMAS CARD LIST PROGRAM BASIC
30 REM ***** DATA INITIALIZATION AREA *****
40 M=1000
50 S=1
60 PRINT
70 REM ***** PROCESSING AREA *****
80 PRINT
90 PRINT " SENT RCVD"
100 FOR I=1 TO M
110 A1$=""
120 A2$=""
130 READ N$
140 IF N$="Y" THEN 220
150 IF N$="N" THEN 230
160 IF S<>1 THEN 165 ELSE 170
165 GOSUB 300
170 IF N$="END" THEN 380
180 S=0
190 N1$=N$
200 READ S1$,S2$,S3$,Z$
```



```

210 GOTO 280
220 A1#=N#
230 READ N#
240 S=0
250 IF N#<>"Y" THEN 270
260 A2#=N#
270 GOTO 130
280 NEXT I
290 REM ***** PRINT ROUTINE *****
300 PRINT " (",A1#,") (",A2#,"";TAB(10);N1#," "
310 PRINT TAB(9);S1#
320 PRINT TAB(4);S2#," ";S3#," ";Z#
330 PRINT
340 K=K+1
350 S=1
360 RETURN
370 REM ***** PROGRAM TERMINATION POINT *****
380 PRINT
390 PRINT
400 PRINT
410 PRINT "NUMBER OF ENTRIES- ";K
420 PRINT
430 STOP
440 REM ***** DATA ENTRIES FOLLOW *****
450 DATA JIM ANY NAME,111 ANY STREET,ANOTHER TOWN,STATE,11111
460 DATA Y,N
470 DATA JUDY DOE,234 MAIN STREET,HOME TOWN,USA,02341
480 DATA N,N
490 DATA TOM AND JERRY FORREST,44 WILLOW LANE,LUMBERTOWN,ALASKA,09876
500 DATA N,Y
510 DATA END

```

>RUN

```

      SENT RCVD
      < > < >
      1 JIM ANY NAME
      ANOTHER TOWN STATE 11111
      < > < > JUDY DOE
      HOME TOWN USA 02341
      < > < > JERRY FORREST
      LUMBERTOWN ALASKA 09876
NUMBER OF ENTRIES- 3

```

MAJOR SYMBOL TABLE - CHRISTMAS CARDS

```

I-----I
I NAME .. DESCRIPTION I
I-----I
I M .. MAXIMUM NUMBER OF DATA READS I
I N# .. NAME/SENT-RCVD INDICATOR I
I N1# .. NAME I
I S1# .. STREET ADDRESS I
I S2# .. CITY ADDRESS I
I S3# .. STATE ADDRESS I
I Z# .. ZIP CODE I
I A1# .. CARD SENT INDICATOR FOR PRINTING I
I A2# .. CARD RCVD INDICATOR FOR PRINTING I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME .. DESCRIPTION I
I-----I
I TAB .. FORMATS PRINT LINES I
I-----I

```

ADDRESSES – VERSION 1

Description

This program produces address listings without all of the frills for you. It is the simplest version of the three programs provided in this book.

Functions of the Program

Addresses are read from DATA statements and are printed in a simple mailing label form.

Instructions for Use

Enter the addresses in the form shown prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Formats

The first record of the data contains the number of lines for spacing purposes. Its form is:

Number of lines

The remaining records are of the form:

Number of lines in address, Line 1, Line 2, etc. ...

Output Description

See example provided. Output is in mailing label format.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

Comments

Instructions are contained in the program.

```
5 REM OPEN YOUR PRINTER AT THIS POINT. IE > 5 OPEN #1:"RS232.BA=9600.DA=B"
6 REM FOR YOUR PRINT STATEMENTS ADD FILE NUMBER TO PRINT STATEMENT. IE> 100 PRI
NT #1:"XXXXX"
10 CALL CLEAR
20 N=35000
30 PRINT "WOULD YOU LIKE TO SEE": "INSTRUCTIONS ( Y OR N)";
40 INPUT G$
50 IF G$="N" THEN 130
60 PRINT "THIS PROGRAM PRODUCES": "LISTINGS OF NAMES"
70 PRINT "AND ADDRESSES PROVIDED IN": "DATA STATEMENTS. TO ENTER"
80 PRINT "THE DATA ENTER THE NAMES AND": "ADDRESSES BEGINNING IN LINE": "NUMBER 10
00. FOR EVERY NAME"
90 PRINT "ENTER THE NUMBER OF LINES OF": "INFORMATION THAT IT WILL": "INCLUDE. AT
LINE NUMBER 999"
100 PRINT "ENTER THE # OF LINES FOR": "PAPER MOVEMENT. END YOUR": "DATA ENTRIES WI
TH A DATA": "O CARD."
110 REM
120 REM
130 REM ***** ENTRY OF NUMBER TO PRINT *****
140 READ N2
150 PRINT "POSITION PAPER NOW"
```

```

160 INPUT G#
170 FOR I=1 TO N
180 READ N1
190 IF N1=0 THEN 300
200 FOR J=1 TO N1
210 READ G#
220 PRINT G#
230 NEXT J
240 IF N1>=N2 THEN 280
250 FOR K=N1+1 TO N2
260 PRINT
270 NEXT K
280 NEXT I
290 REM ***** PROGRAM TERMINATION POINT *****
300 PRINT I-1;"RECORDS WERE PRINTED"
310 STOP
320 REM *****
330 REM
340 REM     EXAMPLE DATA FORMATION FOLLOWS
350 REM
360 REM *****
370 REM LINE 999 CONTAINS # OF LINES FOR PAGE MOVEMENT
380 REM LINES 1000 AND 1004 CONTAIN THE # OF LINE S IN THE ADDRESS
999 DATA 6
1000 DATA 3
1001 DATA "JOHN DOE"
1002 DATA "55 SMOKEY DRIVE"
1003 DATA "GROTON, MASS 02329"
1004 DATA 4
1005 DATA "J. J. MCGEE"
1006 DATA "APT# 22"
1007 DATA "409 WILLOW ST."
1008 DATA "LINCOLN, MA. 09876"
1009 DATA 0

```

```

>RUN
      JOHN DOE
      55 SMOKEY DRIVE
      GROTON, MASS 02329
      4
      J. J. MCGEE
      APT# 22
      409 WILLOW ST.
      LINCOLN, MA. 09876
      0

```

```

JOHN DOE
55 SMOKEY DRIVE
GROTON, MASS 02329

```

```

J. J. MCGEE
APT# 22
409 WILLOW ST.
LINCOLN, MA. 09876

```

2 RECORDS WERE PRINTED

MAJOR SYMBOL TABLE - ADDRESSES - VERSION 1

I	NAME	.. DESCRIPTION	I
I	N	.. MAXIMUM NUMBER OF DATA READS	I
I	N2	.. NUMBER OF LINES FOR PAPER MOVEMENT	I
I	G#	.. TEXT INFORMATION IN	I
I	N1	.. NUMBER OF LINES IN THE ADDRESS	I

ADDRESSES – VERSION 2

Description

This version of the addressing program allows the selected printing of the records in groups.

Functions of the Program

The program prints the record numbers (inclusive) requested during the question/answer sequence. The records preceding the specified start point are ignored, and the program terminates after it has completed the printing of the last record requested.

Instructions for Use

Enter the addresses as data prior to running the program.

Data Entry

All data is entered as DATA statements.

Data Formats

The first data record is the number of lines for spacing purposes. Its form is:

Number of lines for each record print

The remaining records in the data are of the following form:

Number of lines in address, Line 1, Line 2, etc. . . .

Note the 0 card to identify the end of the data.

Output Description

See example provided.

Comments

Instructions are provided in the program.

```
10 CALL CLEAR
20 REM NAME LIST 2 PROGRAM
30 N=3500
40 PRINT "WOULD YOU LIKE TO SEE": "INSTRUCTIONS ( Y OR N)";
50 INPUT G$
60 IF G$="N" THEN 150
70 PRINT "THIS PROGRAM PRODUCES": "ALPHABETIC LISTINGS OF NAMES"
80 PRINT "AND ADDRESSES PROVIDED IN": "DATA STATEMENTS. TO ENTER"
90 PRINT "THE DATA ENTER THE NAMES AND": "ADDRESSES BEGINNING IN LINE": "NUMBER 57
0. FOR EVERY NAME"
100 PRINT "ENTER THE NUMBER OF LINES OF": "INFORMATION THAT IT WILL": "INCLUDE. AT
LINE NUMBER 560"
110 PRINT "ENTER THE # OF LINES FOR": "PAPER MOVEMENT. END YOUR": "DATA ENTRIES WI
TH A DATA": "0 CARD."
120 REM
130 REM OPEN YOUR PRINTER ENTERING A LINE LIKE THIS AT LINE 5. > 5 OPEN #1: "RS2
32.BA=9600.DA=8"
140 REM ADD A FILE NUMBER TO YOUR PRINT STATEMENTS LIKE > 100 PRINT #1: "XXXX"
150 REM ***** ENTRY OF NUMBER TO PRINT *****
```

```

160 READ N2
170 PRINT "RECORDS ARE TO BE PRINTED":N2;" LINES EACH DO YOU WANT"
180 PRINT "TO PRINT ALL OF THE RECORDS"
190 INPUT G$
200 IF G$="Y" THEN 320
210 PRINT "ENTER STARTING AND ENDING": "RECORD NUMBERS (IE 4,55)"
220 INPUT NO,N3
230 N=N3-NO+1
240 REM SKIP APPROPRIATE # OF RECORDS
250 IF NO<=1 THEN 320
260 FOR I=1 TO NO-1
270 READ N1
280 FOR J=1 TO N1
290 READ G$
300 NEXT J
310 NEXT I
320 PRINT "POSITION PAPER NOW"
330 INPUT G$
340 REM                               OUT PUT OF RECORDS
350 FOR I=1 TO N
360 READ N1
370 IF N1=0 THEN 480
380 FOR J=1 TO N1
390 READ G$
400 PRINT G$
410 NEXT J
420 IF N1>=N2 THEN 460
430 FOR K=N1+1 TO N2
440 PRINT
450 NEXT K
460 NEXT I
470 REM ***** PROGRAM TERMINATION POINT *****
480 PRINT I-1;"RECORDS WERE PRINTED"
490 STOP
500 REM *****
510 REM
520 REM   EXAMPLE DATA FORMATION FOLLOWS
530 REM
540 REM *****
550 REM   LINE 560 CONTAINS # OF LINES FOR PAGE MOVEMENT
560 REM   LINES 570 AND 610 CONTAIN THE # OF LINE 8 IN THE ADDRESS
570 DATA 6
580 DATA 3
590 DATA "JOHN DOE"
600 DATA "55 SMOKEY DRIVE"
610 DATA "BROTON, MASS 02329"
620 DATA 4
630 DATA "J. J. MCGEE"
640 DATA "APT# 22"
650 DATA "409 WILLOW ST."
660 DATA "LINCOLN, MA. 09876"
670 DATA 1,"RECORD3"
680 DATA 1,"RECORD4"
690 DATA 1,"RECORD5"
700 DATA 0

```

```

RUN
WOULD YOU LIKE TO SEE THE RECORDS
PRINTED ALL OF THE RECORDS
ENTER STARTING AND ENDING
RECORD NUMBERS (IE 4,55)
POSITION PAPER NOW

```

```

J. J. MCGEE
APT# 22
409 WILLOW ST.
LINCOLN, MA. 09876

```

RECORD3

RECORD4

3 RECORDS WERE PRINTED

MAJOR SYMBOL TABLE - ADDRESSES - VERSION 2

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I N	.. MAXIMUM NUMBER OF DATA READS
I N1	.. NUMBER OF LINES FOR THE ADDRESS
I N2	.. NUMBER OF LINES FOR PAPER MOVEMENT
I N0	.. STARTING RECORD NUMBER
I N3	.. ENDING RECORD NUMBER TO PRINT
I G\$	.. ADDRESS LINE IN
I-----I	

ADDRESSES – VERSION 3

Description

This version allows individualized print formats and provides test print patterns for verification and alignment.

Functions of the Program

The program determines, through the question and answer sequence, the format of the printed output. Test prints are then provided for verification and alignment.

Instructions for Use

Address items are entered as data prior to running the program.

Data Entry

All data is entered as DATA statements.

Data Format

The single format used is:

Number of lines in address, Line 1, Line 2, etc. . . .

Output Description

See example provided. Output format is uniquely specified by your selections, however.

```
10 CALL CLEAR
20 REM NAME LIST 3 PROGRAM
30 N3=3500
40 PRINT "WOULD YOU LIKE TO SEE": "INSTRUCTIONS ( Y OR N)";
50 INPUT G$
60 IF G$="N" THEN 140
70 PRINT "THIS PROGRAM PRODUCES": "ALPHABETIC LISTINGS OF NAMES"
80 PRINT "AND ADDRESSES PROVIDED IN": "DATA STATEMENTS. TO ENTER"
90 PRINT "THE DATA ENTER THE NAMES AND": "ADDRESSES BEGINNING IN LINE": "NUM
BER 1160. FOR EVERY NAME"
100 PRINT "ENTER THE NUMBER OF LINES OF": "INFORMATION THAT IT WILL": "INCLUDE."
110 PRINT "END YOUR DATA ENTRIES WITH": "A DATA O CARD."
120 REM
130 REM OPEN YOUR PRINTER ENTERING A LINE LIKE THIS AT LINE 5. > 5 OPEN #1;
"RS232.BA=9600.DA=8"
140 REM ***** ENTRY OF NUMBER TO PRINT *****
150 PRINT
160 PRINT "DO YOU WANT TO PRINT ALL": "OF THE RECORDS"
170 INPUT G$
180 IF G$="Y" THEN 290
190 PRINT "ENTER STARTING AND ENDING": "RECORD NUMBERS (IE 4,55) "
200 INPUT NO,N3
210 REM ***** SKIP OF UNUSED RECORDS *****
220 IF NO<1 THEN 290
230 FOR I=1 TO NO-1
240 READ N1
250 FOR J=1 TO N1
260 READ G$
270 NEXT J
280 NEXT I
```

```

290 REM ***** CALL TO ALIGNMENT ROUTINE *****
300 GOSUB 550
310 REM
320 REM ***** OUTPUT OF GOOD RECORDS *****
330 N=(N3+1-N0)/C
340 FOR I=1 TO N
350 FOR K=1 TO C
360 READ N1
370 IF N1=0 THEN 430
380 R0=R0+1
390 FOR J=1 TO N1
400 READ A$(J,K)
410 NEXT J
420 NEXT K
430 J=0
440 J=J+1
450 FOR K=1 TO C
460 PRINT TAB(T);A$(J,K);
470 A$(J,K)=" "
480 NEXT K
490 PRINT
500 IF J<N2 THEN 440
510 IF N1=0 THEN 530
520 NEXT I
530 PRINT R0;" RECORDS WERE PRINTED"
540 STOP
550 REM ***** PRINT ALIGNMENT ROUTINE *****
560 PRINT "ENTER THE NUMBER OF VERTICAL": "LINES PER ADDRESS"
570 INPUT N2
580 PRINT "ENTER THE NUMBER OF": "ADDRESSES PER LINE"
590 INPUT C
600 REM
610 DIM X$(12)
620 PRINT "ENTER THE TAB POSITIONS OF": "EACH COLUMN"
630 FOR I=1 TO C
640 INPUT TAX(I)
650 T=TAX(I)
660 NEXT I
670 X$(1)="11111111111111111111111111111111"
680 X$(2)="22222222222222222222222222222222"
690 X$(3)="33333333333333333333333333333333"
700 X$(4)="44444444444444444444444444444444"
710 X$(5)="55555555555555555555555555555555"
720 X$(6)="66666666666666666666666666666666"
730 X$(7)="*****"
740 PRINT "POSITION PAPER NOW"
750 IO=N2
760 INPUT G$
770 C1=0
780 FOR M=1 TO 2
790 FOR I=1 TO IO
800 FOR J=1 TO C
810 PRINT TAB(T);X$(I);
820 NEXT J
830 PRINT
840 NEXT I
850 NEXT M
860 PRINT "ARE THE NUMBER OF VERTICAL": "LINES CORRECT"
870 INPUT V$
880 IF V$="Y" THEN 920
890 PRINT "ENTER THE NUMBER OF VERTICAL": "LINES PER ADDRESS"
900 INPUT N2
910 GOTO 730
920 PRINT "ARE THE HORIZONTAL TABS": "CORRECT"
930 INPUT H$
940 IF H$="Y" THEN 1000
950 PRINT "RE-ENTER TABS"
960 FOR I=1 TO C
970 INPUT TAX(I)
980 T=TAX(I)

```


ARE THE NUMBER OF VERTICAL
 LINES CORRECT
 Y
 ARE THE HORIZONTAL TABS
 CORRECT
 Y
 WOULD YOU LIKE ANOTHER TEST
 PATTERN PRINT
 N

JOHN D. DOE
 556 SMOKEY DRIVE
 GROTON, MASS 07878

JODI MCGEE
 APARTMENT 4C
 456 EASTERLY ROAD
 TAYLORSVILLE, MAINE 03234

RECORD 3

RECORD 4

4 RECORDS WERE PRINTED

MAJOR SYMBOL TABLE - ADDRESSES - VERSION 3

I	NAME	DESCRIPTION	I
I	N3	MAXIMUM NUMBER OF READS/END NUMBER	I
I	N0	STARTING RECORD NUMBER	I
I	A\$()	ADDRESS LINES	I
I	N2	VERTICAL LINES PER ADDRESS	I
I	C	NUMBER OF ADDRESS PER LINE	I
I	N1	NUMBER OF LINES IN ADDRESS IN	I
I	R0	RECORD NUMBER PRINTED	I
I	T()	TAB POSITIONS	I
I	X\$()	LINES OF TEXT IN	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	GOSUB	BRANCHES TO AND RETURNS	I
I	DIM	2 DIMENSION ARRAYS	I

RECORD LISTS

Description

This program maintains your record library. It identifies the records owned and their locations.

Functions of the Program

The program reads the record information from DATA statements and produces a list in the order specified. Multiple passes through the data are used for the ordering process to minimize the use of files or arrays.

Instructions for Use

Enter the record information prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The form of the data is:

Artist, Title of the record, Location

Output Description

See examples provided. The order of the output is determined by the option selected.

```
10 CALL CLEAR
20 REM RECORDS LIST PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "SHALL I PRINT THE ENTRIES IN:";"THE ORDER I HAVE THEM";"(Y OR N)"
60 INPUT A0$
70 IF A0$="Y" THEN 100
80 PRINT "IN ORDER! BY ARTIST (A) OR";"LOCATION (L)"
90 INPUT A$
100 PRINT
110 PRINT
120 PRINT
130 IF A$="A" THEN 260
140 IF A$="L" THEN 560
150 REM ***** PROCESSING AREA *****
160 PRINT " ARTIST/TITLE";TAB(20);"LOCATION"
170 PRINT "-----";TAB(20);"-----"
180 FOR I=1 TO M
190 READ G$
200 IF G$="END" THEN 240
210 READ T$,L$
220 PRINT G$;T$;TAB(20);L$;
230 NEXT I
240 REM ***** TERMINATION POINT *****
250 STOP
260 REM ***** ARTIST SORT AND PRINT *****
270 PRINT " ARTIST/TITLE";TAB(20);"LOCATION"
280 PRINT "-----";TAB(20);"-----"
290 I=1
300 FOR J=1 TO M
```

```

310 READ G$
320 IF G$="END" THEN 480
330 READ T$,L$
340 IF J>I THEN 450
350 IF J<I THEN 470
360 S$=G$
370 IF I=1 THEN 450
380 RESTORE
390 FOR K=1 TO J
400 READ G$,T$,L$
410 IF S$<>G$ THEN 430
420 C=C+1
430 NEXT K
440 IF C>1 THEN 480
450 IF G$<>S$ THEN 470
460 PRINT S$:T$;TAB(20);L$:;
470 NEXT J
480 RESTORE
490 C=0
500 IF I>1 THEN 520
510 M=J-1
520 PRINT
530 I=I+1
540 IF I<=M THEN 300
550 GOTO 240
560 REM ***** LOCATION SORT AND PRINT *****
570 PRINT "LOCATION";TAB(15);"TITLE/ARTIST"
580 PRINT "-----";TAB(15);"-----"
590 I=1
600 FOR J=1 TO M
610 READ G$ \
620 IF G$="END" THEN 780
630 READ T$,L$
640 IF J>I THEN 750
650 IF J<I THEN 770
660 S$=L$
670 IF I=1 THEN 750
680 RESTORE
690 FOR K=1 TO J
700 READ G$,T$,L$
710 IF S$<>L$ THEN 730
720 C=C+1
730 NEXT K
740 IF C>1 THEN 780
750 IF L$<>S$ THEN 770
760 PRINT S$;TAB(15);T$;TAB(15);G$:;
770 NEXT J
780 RESTORE
790 C=0
800 IF I>1 THEN 820
810 M=J-1
820 PRINT
830 I=I+1
840 IF I<=M THEN 600
850 GOTO 240
860 REM ***** DATA ENTRY FOLLOWS *****
870 DATA THE HORSEFLIES,BUZZIN AROUND,ATTIC
880 DATA THE BUMBLEBEES,MAKIN HONEY,REC/CAB
890 DATA SONGSTRESS,HAPPY SONGS,REC/CAB
900 DATA THE STATUES,QUIET SOUNDS,ATTIC
910 DATA THE HORSEFLIES,VOLUME 2,ATTIC
920 DATA END

```

```

SHALL I PRINT THE ENTRIES IN
THE ORDER I HAVE THEM
(Y OR N)
? Y

```

ARTIST/TITLE	LOCATION
THE HORSEFLIES	-----
BUZZIN AROUND	ATTIC

```

THE BUMBLEBEES          REC/CAB
MAKIN HONEY
SONGSTRESS             REC/CAB
HAPPY SONGS
THE STATUES           ATTIC
QUIET SOUNDS
THE HORSEFLIES        ATTIC
VOLUME 2

```

```

SHALL I PRINT THE ENTRIES IN
THE ORDER I HAVE THEM
(Y N)
IN ORDER BY ARTIST (A) OR
LOCATION (L)
?

```

```

ARTIST/TITLE          LOCATION
THE HORSEFLIES       -----
BUZZIN AROUND        ATTIC
THE HORSEFLIES       ATTIC
VOLUME 2
THE BUMBLEBEES          REC/CAB
MAKIN HONEY
SONGSTRESS             REC/CAB
HAPPY SONGS
THE STATUES           ATTIC
QUIET SOUNDS

```

MAJOR SYMBOL TABLE - RECORD LISTS

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS  I
I A$    .. ORDER INDICATOR  I
I G$    .. ARTIST  I
I T$    .. TITLE  I
I L$    .. LOCATION  I
I S$    .. HOLD AREA FOR COMPARE  I
I C     .. COUNTER  I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I TAB   .. FORMATS PRINT LINES  I
I-----I

```

RECORD SEARCH

Description

This program maintains your record library and allows both the printing of its contents and searches for any specific artist or record title.

Functions of the Program

The program reads the record information from DATA statements and prints all records in the order specified or locates all items that match a selection criteria that you supply.

Instructions for Use

The record information must be entered as DATA statements prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format of the record inventory information is:

Artist name, Title of record, Location

Output Description

See example provided. Note the various printing options that are available.

```
10 CALL CLEAR
20 REM RECORD SEARCH AND LIST PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 S=1
50 M=1000
60 PRINT "SHALL I PRINT ALL ITEMS:"(Y OR N)?"
70 INPUT A1$
80 IF A1$="Y" THEN 180
90 PRINT "WOULD YOU LIKE TO SEARCH FOR":"A TITLE(T), OR ARTIST(A)?"
100 INPUT A$
110 IF A$="A" THEN 150
120 PRINT "ENTER THE TITLE TO SEARCH":"FOR"
130 INPUT S$
140 GOTO 280
150 PRINT "ENTER THE ARTIST TO SEARCH":"FOR"
160 INPUT S$
170 GOTO 280
180 PRINT "SHALL I PRINT THE ENTRIES IN":"THE ORDER I HAVE THEM":"(Y OR N)?"
190 INPUT A0$
200 IF A0$="Y" THEN 230
210 PRINT "IN ORDER: BY ARTIST(A) OR":"LOCATION(L)"
220 INPUT A$
230 PRINT
240 PRINT
250 PRINT
260 IF A$="A" THEN 560
270 IF A$="L" THEN 860
280 REM ***** PROCESSING AREA *****
290 PRINT
```

```

300 PRINT
310 PRINT "ARTIST";TAB(28);"TITLE";TAB(48);"LOCATION"
320 PRINT "-----"
330 FOR I=1 TO M
340 READ G$
350 IF G$="END" THEN 420
360 READ T$,L$
370 IF A1$="Y" THEN 400
380 GOSUB 470
390 IF S<>1 THEN 410
400 PRINT G$;TAB(25);T$;TAB(50);L$;:
410 NEXT I
420 REM ***** TERMINATION POINT *****
430 PRINT
440 PRINT
450 PRINT
460 STOP
470 REM ***** SUBROUTINE TO COMPARE ITEMS *****
480 S=0
490 IF A$="A" THEN 530
500 IF T$<>S$ THEN 550
510 S=1
520 GOTO 550
530 IF G$<>S$ THEN 550
540 S=1
550 RETURN
560 REM ***** ARTIST SORT AND PRINT *****
570 PRINT "ARTIST";TAB(28);"TITLE";TAB(48);"LOCATION"
580 PRINT "-----"
590 I=1
600 FOR J=1 TO M
610 READ G$
620 IF G$="END" THEN 780
630 READ T$,L$
640 IF J>I THEN 750
650 IF J<I THEN 770
660 S=G$
670 IF I=1 THEN 750
680 RESTORE
690 FOR K=1 TO J
700 READ G$,T$,L$
710 IF S$<>G$ THEN 730
720 C=C+1
730 NEXT K
740 IF C>1 THEN 780
750 IF G$<>S$ THEN 770
760 PRINT S$;TAB(25);T$;TAB(50);L$;:
770 NEXT J
780 RESTORE
790 C=0
800 IF I>1 THEN 820
810 M=M-1
820 PRINT
830 I=I+1
840 IF I<=M THEN 600
850 GOTO 420
860 REM ***** LOCATION SORT AND PRINT *****
870 PRINT "LOCATION";TAB(15);"TITLE";TAB(45);"ARTIST"
880 PRINT "-----"
890 I=1
900 FOR J=1 TO M
910 READ G$
920 IF G$="END" THEN 1080
930 READ T$,L$
940 IF J>I THEN 1050
950 IF J<I THEN 1070
960 S=L$
970 IF I=1 THEN 1050
980 RESTORE
990 FOR K=1 TO J

```

```

1000 READ G$,T$,L$
1010 IF S$<>L$ THEN 1030
1020 C=C+1
1030 NEXT K
1040 IF C>1 THEN 1080
1050 IF L$<>S$ THEN 1070
1060 PRINT S$;TAB(15);T$;TAB(45);G$:
1070 NEXT J
1080 RESTORE
1090 C=0
1100 IF I>1 THEN 1120
1110 M=J-1
1120 PRINT
1130 I=I+1
1140 IF I<=M THEN 900
1150 GOTO 420
1160 REM ***** DATA ENTRY FOLLOWS *****
1170 DATA THE HORSEFLIES,BUZZIN AROUND,ATTIC
1180 DATA THE BUMBLEBEES,MAKIN HONEY,REC CAB
1190 DATA THE SINGIN SONGSTRESS,HAPPY SONGS,REC CAB
1200 DATA THE STATUES,QUIET SOUNDS,ATTIC
1210 DATA THE HORSEFLIES,VOLUME 2,ATTIC
1220 DATA END

```

```

>RUN
SHALL I PRINT ALL ITEMS
<Y OR N>?
Y
SHALL I PRINT THE ENTRIES IN
THE ORDER I HAVE THEM
<Y OR N>?
Y

```

ARTIST	LOCATION
THE HORSEFLIES BUZZIN AROUND	ATTIC
THE BUMBLEBEES MAKIN HONEY	REC CAB
THE SINGIN SONGSTRESS HAPPY SONGS	REC CAB
THE STATUES QUIET SOUNDS	ATTIC
THE HORSEFLIES VOLUME 2	ATTIC

```

>RUN
SHALL I PRINT ALL ITEMS
<Y OR N>?
N
WOULD YOU LIKE TO SEARCH FOR
A TITLE(T), OR ARTIST(A)?
A
ENTER THE ARTIST TO SEARCH
OR
HARRIED HUSTLERS

```

ARTIST	LOCATION
THE HORSEFLIES BUZZIN AROUND	ATTIC
THE HORSEFLIES VOLUME 2	ATTIC

```

>RUN
SHALL I PRINT ALL ITEMS
<Y OR N>?
N
WOULD YOU LIKE TO SEARCH FOR
A TITLE(T), OR ARTIST(A)?
A
ENTER THE ARTIST TO SEARCH
OR
THE HORSEFLIES

```

ARTIST	LOCATION
THE HORSEFLIES BUZZIN AROUND	ATTIC
THE HORSEFLIES VOLUME 2	ATTIC

MAJOR SYMBOL TABLE - RECORD SEARCH

I	NAME	DESCRIPTION	I
I	S	SWITCH INDICATOR	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	S\$	ITEM TO SEARCH FOR	I
I	A\$	ORDER INDICATOR	I
I	G\$	ARTIST/GROUP	I
I	T\$	TITLE	I
I	L\$	LOCATION	I
I	C	COUNTER	I
I	I	COUNTER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I
I	GOSUB	BRANCHES TO AND RETURNS	I

REFERENCES FILING

Description

This program offers the user the opportunity to record important references for school, hobby, or home use, and to retrieve selected references when required.

Functions of the Program

The program accepts the reference entries from the data and prints either all entries or just those that match the user supplied selection criteria. Selection is based upon the reference code given to each item.

Instructions for Use

Categorize the references within appropriate reference codes, and then enter them as data prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format of the reference entries is:

Reference code, Item, Location, page number

Output Description

See example provided.

```
10 CALL CLEAR
20 REM REFERENCE LOCATING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "SHALL I PRINT ALL ENTRIES": "(Y OR N)";
60 INPUT A$
70 REM
80 IF A$="Y" THEN 110
90 PRINT "ENTER THE REFERENCE CODE": "FOR THE SEARCH"
100 INPUT X$
110 REM
120 REM
130 REM
140 REM
150 PRINT TAB(3); "CODE/"; TAB(17); "ITEM/"; TAB(28); "LOCATION"; TAB(15); "PAGE NBR"
160 PRINT "-----"
170 REM
180 REM ***** PROCESSING AREA *****
190 FOR I=1 TO M
200 READ C$
210 IF C$="END" THEN 320
220 READ R$,L$,P$
230 IF A$<>"Y" THEN 260
240 PRINT C$; TAB(10); R$; TAB(28); L$; TAB(23); P$
241 PRINT
250 GOTO 310
260 IF C$<>X$ THEN 310
270 C=C+1
```

```

280 IF C=1 THEN 300
290 C$=" "
300 PRINT C$;TAB(10);R$;TAB(28);L$;TAB(23);P$
301 PRINT
310 NEXT I
320 REM ***** PROGRAM TERMINATION POINT *****
330 PRINT
340 PRINT
350 PRINT
360 STOP
370 REM ***** DATA ENTRIES FOLLOW *****
380 DATA SOFTWARE,REFERENCE PROG.,BASIC PROG./HOME,56
390 DATA HARDWARE,INSTALLING A DISK,MAG. #1,28
400 DATA SOFTWARE,FISHERMAN'S DIARY,BASIC PROG./HOME,89
410 DATA HARDWARE,FIXING MACHINE X,MAG. #2,98
420 DATA SOFTWARE,9900 SORT,MAG. #3,13
430 DATA SOFTWARE,LSI 11 INST.,REFERENCE BOOK,345
440 DATA SOFTWARE,BASIC,MAG XYS,24
450 DATA END

```

```

>RUN
SHALL I PRINT ALL ENTRIES
(Y OR N)? Y
LOCATION          ITEM/
CODE            PAGE NBR
-----
SOFTWARE REFERENCE PROG. 56
BASIC PROG./HOME
HARDWARE INSTALLING A DISK 28
MAG. #1
SOFTWARE FISHERMAN'S DIARY 89
BASIC PROG./HOME
HARDWARE FIXING MACHINE X 98
MAG. #2
SOFTWARE 9900 SORT 13
MAG. #3
SOFTWARE LSI 11 INST. 345
REFERENCE BOOK
SOFTWARE BASIC 24
MAG XYS

```

```

>RUN
SHALL I PRINT ALL ENTRIES
(Y OR N)? Y
LOCATION          ITEM/
CODE            PAGE NBR
-----
SOFTWARE REFERENCE PROG. 56
BASIC PROG./HOME
SOFTWARE FISHERMAN'S DIARY 89
BASIC PROG./HOME
MAG. #3 9900 SORT 13
REFERENCE LSI 11 INST. 345
BOOK
MAG XYS BASIC 24

```

MAJOR SYMBOL TABLE - REFERENCES

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	X\$	CODE TO SEARCH FOR	I
I	C\$	CODE IN	I
I	R\$	REFERENCE ITEM IN	I
I	P\$	PAGE NUMBER/SUB LOCATION IN	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

MUSIC COLLECTIONS

Description

This program offers the musically inclined an able assistant to locate and print the location of all their favorite pieces. Selected pieces can be searched for and printed, if desired.

Functions of the Program

The program accepts the music entries from the data and prints either all items or just those that match the user-supplied selection criteria. The selection of items is based upon a search through the titles of the data entered.

Instructions for Use

Enter the items as DATA prior to running the program.

Data Entry

All data is entered as DATA statements.

Data Format

The musical pieces are entered in the form:

Title, Location, Page number

Output Description

See example provided. Printed output is either a formatted list of all items or a print of those items that match the title being searched for.

```
10 CALL CLEAR
20 REM MUSIC/SONG LOCATING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 PRINT "SHALL I PRINT ALL ENTRIES":"(Y OR N)?"
60 INPUT A$
70 PRINT
80 IF A$="Y" THEN 150
90 PRINT "ENTER THE SONG TO FIND"
100 INPUT X$
110 PRINT
120 PRINT
130 PRINT
140 PRINT
150 PRINT "SONG";TAB(19);"PAGE NBR";TAB(30);"LOCATION"
160 PRINT "-----"
170 PRINT
180 REM ***** PROCESSING AREA *****
190 FOR I=1 TO M
200 READ R$
210 IF R$="END" THEN 340
220 READ L$,P$
230 IF A$<>"Y" THEN 270
240 PRINT R$;TAB(30);L$;TAB(25);P$
250 PRINT
260 GOTO 330
270 IF R$<>X$ THEN 330
280 S=S+1
```

```

290 IF S=1 THEN 310
300 R$=" "
310 PRINT R$;TAB(30);L$;TAB(25);P$
320 PRINT
330 NEXT I
340 REM ***** PROGRAM TERMINATION POINT *****
350 PRINT
360 PRINT
370 STOP
380 REM ***** DATA ENTRIES FOLLOW *****
390 DATA JINGLE BELLS,INTRO MUSIC BOOK 1,34
400 DATA THE CHRISTMAS SONG,MUSIC FOR CHRISTMAS,86
410 DATA SILENT NIGHT,BOOK 2,190
420 DATA SILVER BELLS,BOOK #3,56
430 DATA JINGLE BELLS,ADVANCED BOOK 4,123
440 DATA DECK THE HALLS,BOOK 7,23
450 DATA WHITE CHRISTMAS,CHRISTMAS BOOK 4,67
460 DATA JINGLE BELLS,BOOK 8,67
470 DATA END

```

SHALL I PRINT ALL ENTRIES
(Y OR N)?
? Y

SONG LOCATION	PAGE NBR
JINGLE BELLS INTRO MUSIC BOOK 1	34
THE CHRISTMAS SONG MUSIC FOR CHRISTMAS	86
SILENT NIGHT BOOK 2	190
SILVER BELLS BOOK #3	56
JINGLE BELLS ADVANCED BOOK 4	123
DECK THE HALLS BOOK 7	23
WHITE CHRISTMAS CHRISTMAS BOOK 4	67
JINGLE BELLS BOOK 8	67

SHALL I PRINT ALL ENTRIES
(Y OR N)?
? N

ENTER THE SONG TO FIND
? JINGLE BELLS

SONG LOCATION	PAGE NBR
JINGLE BELLS INTRO MUSIC BOOK 1	34
ADVANCED BOOK 4	123
BOOK 8	67

BREAK IN 350

MAJOR SYMBOL TABLE - MUSIC

I	-----I
I	NAME .. DESCRIPTION I
I	-----I
I	M .. MAXIMUM NUMBER OF DATA READS I
I	X\$.. SONG/MUSIC TO SEARCH FOR I
I	R\$.. SONG/MUSIC IN I
I	L\$.. LOCATION I
I	P\$.. PAGE NUMBER/SUB LOCATION I
I	-----I

FUNCTIONS USED

I	-----I
I	NAME .. DESCRIPTION I
I	-----I
I	TAB .. FORMATS PRINT LINES I
I	-----I

COIN COLLECTIONS

Description

This program offers the numismatist an able assistant to keep track of his collection. The collection can be listed in its entirety, or selected dates, coin denominations, mints, or coin types can be printed upon request.

Functions of the Program

The program accepts the coin information from the data and prints the items specified. The selection of items to be printed can be based upon most of the items included in the data.

Instructions for Use

Enter the individual collection items into the program prior to running it.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format for the data is:

Coin date, Denomination, Mint, Coin type,
Number minted (in millions), Condition

Output Description

See example provided. Output is either a formatted list of all items or a print of those that satisfy the selection criteria.

```
10 CALL CLEAR
20 REM      COIN COLLECTION PROGRAM
30 REM      ***** DATA INITIALIZATION *****
40 M=1000
50 REM      ***** PROCESSING STARTS *****
60 PRINT "SHALL I PRINT ALL OF THE":"ENTRIES (Y OR N)?"
70 INPUT A$
80 IF A$<>"Y" THEN 230
90 REM      ***** PRINT ROUTINE FOR "ALL" ENTRIES *****
100 PRINT
110 PRINT
120 PRINT
130 PRINT "DATE";TAB(8);"SIZE";TAB(14);"MINT";TAB(22);"TYPE";TAB(36);
140 PRINT "NBR(MIL)";TAB(48);"CONDITION"
150 PRINT "-----"
160 PRINT
170 FOR I=1 TO M
180 READ D$
190 IF D$="END" THEN 990
200 READ S$,M$,T$,N,C$
210 PRINT D$;TAB(9);S$;TAB(15);M$;TAB(20);T$;TAB(36);N;TAB(48);C$:
220 NEXT I
230 PRINT "WHAT SHALL I SEARCH FOR":"DATE(D),DENOMINATION SIZE(S)":"MINT
(M) OR TYPE(T)?"
240 PRINT
250 INPUT A$
260 IF A$="T" THEN 820
```



```

270 IF A$="S" THEN 460
280 IF A$="M" THEN 640
290 REM ***** DATE SEARCH AND PRINT *****
300 PRINT "ENTER THE DATE TO SEARCH": "FOR"
310 INPUT X$
320 PRINT
330 PRINT
340 PRINT X$;TAB(8); "SIZE";TAB(14); "MINT";TAB(22); "TYPE";
350 PRINT TAB(36); "NBR(MIL)";TAB(48); "CONDITION"
360 PRINT "-----"
370 PRINT
380 FOR I=1 TO M
390 READ D$
400 IF D$="END" THEN 990
410 READ S$,M$,T$,N,C$
420 IF D$<>X$ THEN 440
430 PRINT TAB(8);S$;TAB(16);M$;TAB(20);T$;TAB(36);N$;TAB(48);C$:
440 NEXT I
450 GOTO 990
460 REM *****DENOMINATION SIZE SEARCH AND PRINT *****
470 PRINT "ENTER THE DENOMINATION SIZE": "TO SEARCH FOR"
480 INPUT X$
490 PRINT
500 PRINT
510 PRINT
520 PRINT " ";X$;TAB(8); "DATE";TAB(14); "MINT";TAB(22); "TYPE";
530 PRINT TAB(36); "NBR(MIL)";TAB(47); "CONDITION"
540 PRINT "-----"
550 PRINT
560 FOR I=1 TO M
570 READ D$
580 IF D$="END" THEN 990
590 READ S$,M$,T$,N,C$
600 IF S$<>X$ THEN 620
610 PRINT TAB(9);D$;TAB(15);M$;TAB(20);T$;TAB(36);N$;TAB(48);C$:
620 NEXT I
630 GOTO 990
640 REM ***** MINT SEARCH AND PRINT *****
650 PRINT "ENTER THE MINT TO SEARCH FOR"
660 INPUT X$
670 PRINT
680 PRINT
690 PRINT
700 PRINT " ";X$;TAB(8); "DATE";TAB(15); "SIZE";TAB(22); "TYPE";
710 PRINT TAB(36); "NBR(MIL)";TAB(47); "CONDITION"
720 PRINT "-----"
730 PRINT
740 FOR I=1 TO M
750 READ D$
760 IF D$="END" THEN 990
770 READ S$,M$,T$,N,C$
780 IF M$<>X$ THEN 800
790 PRINT TAB(9);D$;TAB(15);S$;TAB(20);T$;TAB(36);N$;TAB(48);C$:
800 NEXT I
810 GOTO 990
820 REM ***** TYPE SEARCH AND PRINT *****
830 PRINT "ENTER THE TYPE TO SEARCH FOR"
840 INPUT X$
850 PRINT
860 PRINT
870 PRINT
880 PRINT " ";X$;TAB(2); "MINT";TAB(8); "NBR(MIL)";TAB(16); "DATE";TAB(23);
"SIZE";
890 PRINT TAB(23); "COND. "
900 PRINT "-----"
910 PRINT
920 FOR I=1 TO M
930 READ D$
940 IF D$="END" THEN 990
950 READ S$,M$,T$,N,C$

```

```

960 IF T*(>X$ THEN 980
970 PRINT TAB(2);M$;TAB(8);N;TAB(16);D$;TAB(23);S$;TAB(51);C$:;
980 NEXT I
990 REM ***** PROGRAM TERMINATION POINT *****
1000 PRINT
1010 PRINT
1020 STOP
1030 REM ***** DATA ENTRIES FOLLOW *****
1040 DATA 1947,.25,D,FRANKLIN,10.00,VF
1050 DATA 1944,.05,S,SILVER,22.00,PROOF
1060 DATA 1965,.10,D,FLAW,114.1,F
1070 DATA 1978,M,S,PROOF SET,3.2,PROOF
1080 DATA 1979,M,P,MINT SET,4.50,UNC
1090 DATA 1945,.05,D,SILVER,16.47,VF
1100 DATA 1907,.01,S,,.35,G
1110 DATA 1901,.01,,INDIAN,.86,G
1120 DATA 1865,1.00,CC,.65.17,G
1130 DATA 1945,.25,S,FRANKLIN,8.89,F
1140 DATA END

```

```

>RUN
SHALL I PRINT ALL OF THE
ENTRIES (Y OR N)?
? Y

```

DATE	SIZE	MINT	TYPE
	NBR(MIL)		CONDITION
1947	.25 10	D	FRANKLIN VF
1944	.05 22	S	SILVER PROOF
1965	.10 114.1	D	FLAW F
1978	M 3.2	S	PROOF SET PROOF
1979	M 4.5	P	MINT SET UNC
1945	.05 16.47	D	SILVER VF
1907	.01 .35	S	G
1901	.01 .86		INDIAN G
1865	1.00 65.17	CC	G
1945	.25 8.89	S	FRANKLIN F

```

>RUN
SHALL I PRINT ALL OF THE
ENTRIES (Y OR N)?
? N
WHAT SHALL I SEARCH FOR:
DATE(D),DENOMINATION SIZE(S)
MINT(M) OR TYPE(T)?

```

? S
 ENTER THE DENOMINATION SIZE
 TO SEARCH FOR
 ? M

M	DATE	MINT	TYPE
	NBR(MIL)		CONDITION
	1978	S	PROOF SET
	3.2		PROOF
	1979	P	MINT SET
	4.5		UNC

MAJOR SYMBOL TABLE - COINS

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	D\$	DATE OF COIN	I
I	S\$	SIZE (DENOMINATION) OF COIN	I
I	M\$	MINT OF COIN	I
I	T\$	COIN TYPE	I
I	N	NBR MINTED (MILLIONS)	I
I	C\$	COIN CONDITION	I
I	X\$	ITEM TO SEARCH FOR	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

COIN INVESTMENTS

Description

This program offers additional information to the numismatist that considers the collection as an investment. The collection information maintained by this program differs slightly from the previous version.

Functions of the Program

This program accepts the coin information from the data items and prints it as specified by your responses to the program's questions. The list can include all, or selected categories of, items and can, if desired, include total cost and current value information.

Instructions for Use

The individual item information must be entered prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format of the data is:

Coin date, Denomination, Mint, Type,
Number minted (in millions), Purchase date, Quantity, Cost, Value

Output Description

See example provided.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM      COIN INVESTMENT RECORD PROGRAM
22 REM      ***** OPEN STATEMENT FOR PRINTER *****
24 REM      *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
26 OPEN #1: "RS232.BA=9600.DA=8"
30 REM      ***** DATA INITIALIZATION *****
40 M=1000
50 REM      ***** PROCESSING STARTS *****
60 PRINT "SHALL I PRINT ALL OF THE": "ENTRIES (Y OR N)?"
70 INPUT A$
80 PRINT "SHALL I PRODUCE TOTAL COSTS/": "VALUES FOR YOU (Y OR N)?"
90 INPUT A1$
100 IF A$<>"Y" THEN 310
110 REM      ***** PRINT ROUTINE FOR "ALL" ENTRIES *****
120 PRINT #1:
130 PRINT #1:
140 PRINT #1:
150 PRINT #1: "DATE"; TAB(8); "SIZE"; TAB(14); "COND"; TAB(22); "TYPE"; TAB(34);
160 PRINT #1: "NBR(MIL)"; TAB(47); "PRCH"; TAB(53); "QTY"; TAB(60); "COST";
170 PRINT #1: TAB(65); "VALUE"
180 PRINT #1: "-----"; TAB(8); "-----"; TAB(14); "-----"; TAB(20); "-----";
190 PRINT #1: TAB(34); "-----"; TAB(45); "-----"; TAB(53); "-----";
```

```

200 PRINT #1: TAB(60); "----"; TAB(6); "-----"
210 FOR I=1 TO M
220 READ D$
230 IF D$="END" THEN 1310
240 READ S$,M$,T$,N,C$,P$,Q,C,V
250 PRINT #1: D$;M$;TAB(8);S$;TAB(15);C$;TAB(20);T$;TAB(36);N$;TAB(44);
260 PRINT #1:P$;TAB(53);Q$;TAB(59);C$;TAB(65);V
270 IF A1$<>"Y" THEN 300
280 C1=C1+(C*Q)
290 V1=V1+(V*Q)
300 NEXT I
310 PRINT "WHAT SHALL I SEARCH FOR": "DATE(D), DENOMINATION SIZE(S)"
320 PRINT "MINT(M), OR TYPE(T)?"
330 INPUT A$
340 IF A$="T" THEN 1080
350 IF A$="S" THEN 600
360 IF A$="M" THEN 840
370 REM ***** DATE SEARCH AND PRINT *****
380 PRINT "ENTER THE DATE TO SEARCH FOR"
390 INPUT X$
400 PRINT #1:
410 PRINT #1:
420 PRINT #1: " "; X$; TAB(8); "SIZE"; TAB(14); "COND"; TAB(22); "TYPE"; TAB(34);
430 PRINT #1: "NBR(MIL)"; TAB(47); "PRCH"; TAB(53); "QTY"; TAB(60); "COST";
440 PRINT #1: TAB(65); "VALUE"
450 PRINT #1: TAB(8); "----"; TAB(14); "----"; TAB(20); "-----";
460 PRINT #1: TAB(34); "-----"; TAB(45); "-----"; TAB(53); "----";
470 PRINT #1: TAB(60); "----"; TAB(65); "-----"
480 FOR I=1 TO M
490 READ D$
500 IF D$="END" THEN 1310
510 READ S$,M$,T$,N,C$,P$,Q,C,V
520 IF D$<>X$ THEN 580
530 PRINT #1: TAB(5);M$;TAB(8);S$;TAB(15);C$;TAB(20);T$;TAB(36);N$;TAB(44);
540 PRINT #1:P$;TAB(53);Q$;TAB(59);C$;TAB(65);V
550 IF A1$<>"Y" THEN 580
560 C1=C1+(C*Q)
570 V1=V1+(V*Q)
580 NEXT I
590 GOTO 1310
600 REM *****DENOMINATION SIZE TO SEARCH AND PRINT*****
610 PRINT "ENTER THE DENOMINATION SIZE": "TO SEARCH FOR"
620 INPUT X$
630 PRINT #1:
640 PRINT #1:
650 PRINT #1:
660 PRINT #1: " "; X$; TAB(8); "DATE"; TAB(14); "COND"; TAB(22); "TYPE"; TAB(34);
670 PRINT #1: "NBR(MIL)"; TAB(47); "PRCH"; TAB(53); "QTY"; TAB(60); "COST";
680 PRINT #1: TAB(65); "VALUE"
690 PRINT #1: TAB(8); "----"; TAB(14); "----"; TAB(20); "-----";
700 PRINT #1: TAB(34); "-----"; TAB(45); "-----"; TAB(53); "----";
710 PRINT #1: TAB(60); "----"; TAB(65); "-----"
720 FOR I=1 TO M
730 READ D$
740 IF D$="END" THEN 1310
750 READ S$,M$,T$,N,C$,P$,Q,C,V
760 IF S$<>X$ THEN 820
770 PRINT #1: TAB(8);D$;M$;TAB(15);C$;TAB(20);T$;TAB(36);N$;TAB(44);
780 PRINT #1:P$;TAB(53);Q$;TAB(59);C$;TAB(65);V
790 IF A1$<>"Y" THEN 820
800 C1=C1+(C*Q)
810 V1=V1+(V*Q)
820 NEXT I
830 GOTO 1310
840 REM ***** MINT SEARCH AND PRINT *****
850 PRINT "ENTER THE MINT TO SEARCH FOR"
860 INPUT X$
870 PRINT #1:
880 PRINT #1:
890 PRINT #1:

```

```

900 PRINT #1: " "; X$; TAB(5); "DATE CD"; TAB(15); "SIZE"; TAB(22); "TYPE";
910 PRINT #1: TAB(34); "NBR(MIL)"; TAB(47); "PRCH"; TAB(53); "QTY"; TAB(60);
920 PRINT #1: "COST"; TAB(65); "VALUE"
930 PRINT #1: TAB(5); "----"; TAB(15); "----"; TAB(20); "-----";
940 PRINT #1: TAB(34); "-----"; TAB(45); "-----"; TAB(53); "----";
950 PRINT #1: TAB(60); "----"; TAB(65); "-----"
960 FOR I=1 TO M
970 READ D$
980 IF D$="END" THEN 1310
990 READ S$,M$,T$,N,C$,P$,Q,C,V
1000 IF M$<>X$ THEN 1060
1010 PRINT #1: TAB(5); D$; TAB(10); C$; TAB(15); S$; TAB(20); T$; TAB(36); N$;
1020 PRINT #1: TAB(44); P$; TAB(53); Q$; TAB(59); C$; TAB(65); V
1030 IF A1$<>"Y" THEN 1060
1040 C1=C1+(C*Q)
1050 V1=V1+(V*Q)
1060 NEXT I
1070 GOTO 1310
1080 REM ***** TYPE SEARCH AND PRINT *****
1090 PRINT "ENTER THE TYPE TO SEARCH FOR"
1100 INPUT X$
1110 PRINT #1:
1120 PRINT #1:
1130 PRINT #1:
1140 PRINT #1: " "; X$; TAB(16); "DATE"; TAB(24); "SIZE"; TAB(29); "COND";
1150 PRINT #1: TAB(34); "NBR(MIL)"; TAB(47); "PRCH"; TAB(53); "QTY"; TAB(60);
1160 PRINT #1: "COST"; TAB(65); "VALUE"
1170 PRINT #1: TAB(16); "----"; TAB(24); "----"; TAB(29); "----"; TAB(34);
1180 PRINT #1: "-----"; TAB(45); "-----"; TAB(53); "----";
1190 PRINT #1: TAB(60); "----"; TAB(65); "-----"
1200 FOR I=1 TO M
1210 READ D$
1220 IF D$="END" THEN 1310
1230 READ S$,M$,T$,N,C$,P$,Q,C,V
1240 IF T$<>X$ THEN 1300
1250 PRINT #1: TAB(16); D$; TAB(24); S$; TAB(30); C$; TAB(34); N$; TAB(44);
1260 PRINT #1: P$; TAB(53); Q$; TAB(59); C$; TAB(65); V
1270 IF A1$<>"Y" THEN 1300
1280 C1=C1+(C*Q)
1290 V1=V1+(V*Q)
1300 NEXT I
1310 REM ***** PROGRAM TERMINATION POINT *****
1320 PRINT #1:
1330 PRINT #1:
1340 IF A1$<>"Y" THEN 1430
1350 PRINT #1: "*****"
1360 PRINT #1: " TOTAL COST WAS "; C1
1370 PRINT #1: "*****"
1380 PRINT #1: " TOTAL VALUE IS "; V1
1390 PRINT #1: "*****"
1400 PRINT #1:
1410 PRINT #1:
1420 PRINT #1:
1430 STOP
1440 REM ***** DATA ENTRIES FOLLOW *****
1450 DATA 1947,.25,D,WASHINGTON,10,VF,DEC 1978,1,1.50,1.50
1460 DATA 1944,.05,S,SILVER,11.1,VG,JAN 1979,50,1.50,1.75
1470 DATA 1965,.10,D,FLAW,114.1,F,FEB 1979,1,10,11.50
1480 DATA 1978,M,S,PROOF SET,3.2,PR,OCT 1978,10,1.00,17.50
1490 DATA 1978,M,S,MINT SET,4.50,BU,OCT 1978,10,4.00,14.00
1500 DATA 1945,.05,D,SILVER,16.47,VF,JUL 1978,100,.40,.55
1510 DATA 1907,.01,,INDIAN,.35,G,AUG 1979,1000,.75,.80
1520 DATA 1901,.01,,INDIAN,.86,G,SEP 1979,2000,.75,.80
1530 DATA 1875,1.00,CC,,65.17,G,SEP 1979,1,65,75
1540 DATA 1945,.25,S,WASHINGTON,8.89,F,SEP 1979,5,1.75,2.10
1550 DATA END

```

```

>RUN
SHALL I PRINT ALL OF THE
ENTRIES (Y OR N)?
? Y
SHALL I PRODUCE TOTAL COSTS/
VALUES FOR YOU (Y OR N)?
? Y

```

DATE	SIZE	COND	TYPE	NBR(MIL)	PRCH	QTY	COST	VALUE
1947D	.25	VF	WASHINGTON	10	DEC 1978	1	1.5	1.5
1944S	.05	VG	SILVER	11.1	JAN 1979	50	1.5	1.75
1965D	.10	F	FLAW	114.1	FEB 1979	1	10	11.5
1978S	M	PR	PROOF SET	3.2	OCT 1978	10	1	17.5
1978S	M	BU	MINT SET	4.5	OCT 1978	10	4	14
1945D	.05	VF	SILVER	16.47	JUL 1978	100	.4	.55
1907	.01	G	INDIAN	.35	AUG 1979	1000	.75	.8
1901	.01	G	INDIAN	.86	SEP 1979	2000	.75	.8
1875CC	1.00	G		65.17	SEP 1979	1	65	75
1945S	.25	F	WASHINGTON	8.89	SEP 1979	5	1.75	2.1

```

*****
TOTAL COST WAS 2500.25
*****
TOTAL VALUE IS 2956
*****

```

```

>RUN
SHALL I PRINT ALL OF THE
ENTRIES (Y OR N)?
? N
SHALL I PRODUCE TOTAL COSTS/
VALUES FOR YOU (Y OR N)?
? N
WHAT SHALL I SEARCH FOR
DATE(D), DENOMINATION SIZE(S)
MINT(M), OR TYPE(T)?
? D
ENTER THE DATE TO SEARCH FOR
? 1945

```

DATE	SIZE	COND	TYPE	NBR(MIL)	PRCH	QTY	COST	VALUE
D	.05	VF	SILVER	16.47	JUL 1978	100	.4	.55
S	.25	F	WASHINGTON	8.89	SEP 1979	5	1.75	2.1

MAJOR SYMBOL TABLE - COIN INVESTMENTS

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I M	.. MAXIMUM NUMBER OF DATA READS
I D\$	.. DATE OF COIN
I S\$	.. SIZE (DENOMINATION) OF COIN
I M\$	.. MINT OF COIN
I T\$	.. TYPE OF COIN
I N	.. NUMBER MINTED (MILLIONS)
I C\$	.. CONDITION
I P\$	.. PURCHASE DATE
I Q	.. QTY OWNED
I C	.. COST
I V	.. VALUE
I C1	.. TOTAL COSTS
I V1	.. TOTAL VALUE
I X\$	.. ITEM TO SEARCH FOR
I-----I	

FUNCTIONS USED

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I TAB	.. FORMATS PRINT LINES
I-----I	

BEER CAN COLLECTION

Description

This program offers beer can collectors (young or old) the capability to control their collections and take advantage of opportunities for trades.

Functions of the Program

The program accepts from the data the information concerning the individual cans in the collection and then prints the items specified. The items printed can include all or just a part of the collection, depending upon the selection criteria provided.

Instructions for Use

Enter the individual items of the collection as data prior to running the program. Items sold or traded should be deleted when the transaction occurs.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format for the collection data is:

Brand name, Size, Can type, Material, Color/Condition

Output Description

See example provided. Output is either a formatted list of all items or a list of those that match the selection criteria specified.

```
10 CALL CLEAR
20 REM BEERCAN COLLECTION PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 REM ***** PROCESSING STARTS *****
60 PRINT "SHALL I PRINT ALL OF THE":"ENTRIES (Y OR N)?"
70 INPUT A$
80 IF A$<>"Y" THEN 230
90 REM ***** PRINT ROUTINE FOR "ALL" ENTRIES *****
100 PRINT
110 PRINT
120 PRINT
130 PRINT TAB(8);"BRAND";"SIZE";TAB(8);"TYPE";TAB(17);"MAT"
140 PRINT "COLOR/CONDITION"
150 PRINT "-----"
160 PRINT
170 FOR I=1 TO M
180 READ B$
190 IF B$="END" THEN 790
200 READ S$,T$,M$,C$
210 PRINT B$:S$:TAB(8);T$:TAB(16);M$:C$:
220 NEXT I
230 PRINT "WHAT SHALL I SEARCH FOR:":"BRAND(B), SIZE(S) OR TYPE(T)"
240 INPUT A$
250 IF A$="T" THEN 620
260 IF A$="S" THEN 440
```

```

270 REM ***** BRAND SEARCH AND PRINT *****
280 PRINT "ENTER THE BRAND TO SEARCH";"FOR"
290 INPUT X$
300 PRINT
310 PRINT
320 PRINT X$;"SIZE";TAB(8);"TYPE";TAB(16);"MAT"
330 PRINT "COLOR/CONDITION"
340 PRINT "-----"
350 PRINT
360 FOR I=1 TO M
370 READ B$
380 IF B$="END" THEN 790
390 READ S$,T$,M$,C$
400 IF B$<>X$ THEN 420
410 PRINT S$;TAB(8);T$;TAB(16);M$:C$:
420 NEXT I
430 GOTO 790
440 REM ***** SIZE SEARCH AND PRINT *****
450 PRINT "ENTER THE SIZE TO SEARCH FOR"
460 INPUT X$
470 PRINT
480 PRINT
490 PRINT
500 PRINT " ";X$;TAB(10);"BRAND":TAB(8);"TYPE";TAB(17);"MAT"
510 PRINT "COLOR/CONDITION"
520 PRINT "-----"
530 PRINT
540 FOR I=1 TO M
550 READ B$
560 IF B$="END" THEN 790
570 READ S$,T$,M$,C$
580 IF S$<>X$ THEN 600
590 PRINT TAB(10);B$;TAB(8);T$;TAB(17);M$:C$:
600 NEXT I
610 GOTO 790
620 REM ***** TYPE SEARCH AND PRINT *****
630 PRINT "ENTER THE TYPE TO SEARCH FOR"
630 PRINT "ENTER THE TYPE TO SEARCH FOR"
640 INPUT X$
650 PRINT
660 PRINT
670 PRINT
680 PRINT " ";X$;TAB(10);"BRAND":TAB(8);"SIZE";TAB(16);"MAT"
690 PRINT "COLOR/CONDITION"
700 PRINT "-----"
710 PRINT
720 FOR I=1 TO M
730 READ B$
740 IF B$="END" THEN 790
750 READ S$,T$,M$,C$
760 IF T$<>X$ THEN 780
770 PRINT TAB(10);B$;TAB(8);S$;TAB(16);M$:C$:
780 NEXT I
790 REM ***** PROGRAM TERMINATION POINT *****
800 PRINT
810 PRINT
820 STOP
830 REM ***** DATA ENTRIES FOLLOW *****
840 DATA BRAND X,8 OZ,TAB TOP,ALUM,YELLOW GOOD
850 DATA BRAND Y SPECIAL,16 OZ,TAB TOP,STEEL,R/W EXCELLENT
860 DATA BRAND X SPECIAL,8 OZ,PCH TOP,ALUM,RED POOR
870 DATA BRAND Y SPECIAL,8 OZ,TAB TOP,ALUM,GREEN GOOD
880 DATA BRAND X,16 OZ,PCH TOP,STEEL,R/W GOOD
890 DATA END

```

>RUN
SHALL I PRINT ALL OF THE
ENTRIES (Y OR N)?
? Y

 BRAND
SIZE TYPE MAT
COLOR/CONDITION

BRAND X
8 OZ TAB TOP ALUM
YELLOW GOOD

BRAND Y SPECIAL
16 OZ TAB TOP STEEL
R/W EXCELLENT

BRAND X SPECIAL
8 OZ PCH TOP ALUM
RED POOR

BRAND Y SPECIAL
8 OZ TAB TOP ALUM
GREEN GOOD

BRAND X
16 OZ PCH TOP STEEL
R/W GOOD

>RUN
SHALL I PRINT ALL OF THE
ENTRIES (Y OR N)?
? N
WHAT SHALL I SEARCH FOR:
BRAND(B), SIZE(S) OR TYPE(T)
? T
ENTER THE TYPE TO SEARCH FOR
? TAB TOP

 TAB TOP BRAND
 SIZE MAT
COLOR/CONDITION

 BRAND X
 8 OZ ALUM
YELLOW GOOD

 BRAND Y SPECIAL
 16 OZ STEEL
R/W EXCELLENT

 BRAND Y SPECIAL
 8 OZ ALUM
GREEN GOOD

MAJOR SYMBOL TABLE - BEER CANS

-----I	
I NAME	.. DESCRIPTION
-----I	
I M	.. MAXIMUM NUMBER OF DATA READS
I B\$	.. BRAND NAME
I S\$	.. SIZE OF CAN
I T\$	.. TYPE OF CAN
I M\$	.. CAN MATERIAL
I C\$	.. COLOR/CONDITION
I X\$	.. ITEM TO SEARCH FOR
-----I	

FUNCTIONS USED

-----I	
I NAME	.. DESCRIPTION
-----I	
I TAB	.. FORMATS PRINT LINES
-----I	

BOOK COLLECTIONS

Description

The computer really becomes a librarian with this program. Books in your private collection can be listed or searched, as you desire, thus allowing you to control your library.

Functions of the Program

The program accepts the information about each book from the data and then prints the entries or selects those that match the criteria specified.

Instructions for Use

Prior to running the program, information about the books in the collection must be provided.

Data Entry

All data is entered as DATA statements.

Data Format

The form of the data input is:

Title, Author, Location

Output Description

See example provided. Output is a formatted list of all items or just those that satisfy the selection criteria specified.

```
10 CALL CLEAR
20 REM   BOOK COLLECTION PROGRAM
30 REM   ***** DATA INITIALIZATION *****
40 M=1000
50 REM   ***** PROCESSING STARTS *****
60 PRINT "SHALL I PRINT ALL OF THE";"ENTRIES (Y OR N)?"
70 INPUT A$
80 IF A$<>"Y" THEN 220
90 REM   ***** PRINT ROUTINE FOR "ALL" ENTRIES *****
100 PRINT
110 PRINT
120 PRINT
130 PRINT "TITLE";TAB(16);"LOCATION";TAB(28);"AUTHOR"
140 PRINT "-----"
150 PRINT
160 FOR I=1 TO M
170 READ T$
180 IF T$="END" THEN 720
190 READ A$,L$
200 PRINT T$;TAB(19);L$;TAB(28);A$:
210 NEXT I
220 PRINT "WHAT SHALL I SEARCH FOR: "; "AUTHOR(A),TITLE(T),OR"; "LOCATION(L)?"
230 INPUT A$
240 IF A$="L" THEN 570
250 IF A$="A" THEN 410
260 REM   ***** TITLE SEARCH AND PRINT *****
270 PRINT "ENTER THE TITLE TO SEARCH";"FOR"
```

```

280 INPUT X$
290 PRINT
300 PRINT
310 PRINT X$;TAB(16);"LOCATIION";TAB(28);"AUTHOR"
320 PRINT "-----"
330 FOR I=1 TO M
340 READ T$
350 IF T$="END" THEN 720
360 READ A$,L$
370 IF T$<>X$ THEN 390
380 PRINT TAB(16);L$;TAB(28);A$
390 NEXT I
400 GOTO 720
410 REM ***** AUTHOR SEARCH AND PRINT *****
420 PRINT "ENTER THE AUTHOR TO SEARCH":"FOR"
430 INPUT X$
440 PRINT
450 PRINT
460 PRINT
470 PRINT X$;TAB(19);"LOCATION";TAB(28);"TITLE"
480 PRINT "-----"
490 FOR I=1 TO M
500 READ T$
510 IF T$="END" THEN 720
520 READ A$,L$
530 IF A$<>X$ THEN 550
540 PRINT TAB(19);L$;TAB(28);T$:
550 NEXT I
560 GOTO 720
570 REM ***** LOCATION SEARCH AND PRINT *****
580 PRINT "ENTER THE LOCATION TO SEARCH":"FOR"
590 INPUT X$
600 PRINT
610 PRINT
620 PRINT
630 PRINT " ";X$;TAB(28);"TITLE";TAB(56);"AUTHOR"
640 PRINT "-----"
650 FOR I=1 TO M
660 READ T$
670 IF T$="END" THEN 720
680 READ A$,L$
690 IF L$<>X$ THEN 710
700 PRINT T$;TAB(28);A$:
710 NEXT I
720 REM ***** PROGRAM TERMINATION POINT *****
730 PRINT
740 PRINT
750 STOP
760 REM ***** DATA ENTRIES FOLLOW *****
770 DATA BASIC PROGRAMS FOR THE HOME,CHARLES STERNBERG,SHELF 1
780 DATA BOOK 2,ANOTHER AUTHOR,SHELF 2
790 DATA BOOK 3,ANOTHER AUTHOR,SHELF 1
800 DATA BOOK 4,CHARLES STERNBERG,SHELF 2
810 DATA BOOK 5,DAVID JONES,SHELF 2
820 DATA END

```

```

>RUN
SHALL I PRINT ALL OF THE
ENTRIES (Y OR N)?
? Y

```

```

TITLE                LOCATION
AUTHOR -----
BASIC PROGRAMS FOR THE HOME
CHARLES STERNBERG    SHELF 1
BOOK 2               SHELF 2
ANOTHER AUTHOR
BOOK 3               SHELF 1
ANOTHER AUTHOR

```

```

BOOK 4          SHELF 2
CHARLES STERNBERG
BOOK 5          SHELF 2
DAVID JONES

```

```

> UN
> ROMAN
> ALL I PRINT ALL OF THE
> NTRIES <Y OR N>?
> HAT SHALL I SEARCH FOR:
> UTHOR<A>, TITLE<T>, OR
> CATION<L>?
> ENTER THE AUTHOR TO SEARCH
> OR CHARLES STERNBERG

```

```

CHARLES STERNBERG LOCATION
TITLE
-----SHELF 1-----
BASIC PROGRAMS FOR THE HOME
BOOK 4          SHELF 2

```

MAJOR SYMBOL TABLE - BOOKS

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS I
I T$    .. TITLE        I
I A$    .. AUTHOR       I
I L$    .. LOCATION     I
I X$    .. ITEM TO SEARCH FOR I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION  I
I-----I
I TAB   .. FORMATS PRINT LINES I
I-----I

```

SERVICE CALLS

Description

Service information and repair points are recalled at the touch of a button with this program for recording service information on your major home appliances.

Functions of the Program

This program provides little processing capability as it merely produces a formatted list of the service items included in the data. It does provide, however, a simple means of eliminating nagging household problems.

Instructions for Use

Enter information about the appliances and their service points prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The form of the data is:

Appliance, Repair company, Address, Telephone number

Output Description

See example provided.

Comments

This program is ideally suited for experimentation in adding functions or extensions to the possibilities provided. As a start, consider adding a selection function to print specified items.

```
10 REM CALL CLEAR
20 REM SERVICE CALL PROGRAM - BASIC
30 REM ***** DATA INITIATION *****
40 M=1000
50 REM ***** PROCESSING AREA *****
60 FOR I=1 TO M
70 READ I$
80 IF I$="END" THEN 150
90 PRINT
100 READ S$,X$,T$
110 PRINT I$;TAB(16);S$;TAB(0);T$;
120 PRINT TAB(16);X$
130 NEXT I
140 REM ***** PROGRAM TERMINATION POINT *****
150 PRINT
160 PRINT
170 STOP
180 REM ***** DATA ENTRIES FOLLOW *****
190 DATA TELEVISION,XYZ SERVICE,ANY STREET,555-1234
200 DATA SEWING MACHINE,ABC CORP.,WILSON ST.,333-1100
210 DATA END
```


>RUN

```
TELEVISION      XYZ SERVICE
555-1234        ANY STREET
SEWING MACHINE  ABC CORP.
333-1100        WILSON ST.
```

MAJOR SYMBOL TABLE - SERVICE CALLS

```
I-----I
I NAME  .. DESCRIPTION  I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS I
I I$    .. ITEM        I
I S$    .. COMPANY FOR SERVICE  I
I X$    .. ADDRESS OF COMPANY   I
I T$    .. TELEPHONE OF COMPANY I
I-----I
```

FUNCTIONS USED

```
I-----I
I NAME  .. DESCRIPTION  I
I-----I
I TAB   .. FORMATS PRINT LINES I
I-----I
```

RECORDING TAPES

Description

There is no reason to search manually through tape reels and hand-written notes to find a particular recording when this program can do it for you in much less time.

Functions of the Program

The program reads the tape information from the data supplied and prints an index of any or all tapes, or locates all items that meet the criteria specified.

Instructions for Use

The tape information and recorded items must be entered prior to running the program for the first time.

Data Entry

All data is entered by means of DATA statements.

Data Formats

1. A master record is required for each tape. The form is:
Tape number, Speed
2. Recorded items are entered using the form:
A, Artist name, Title, Location on the tape

Output Description

See examples provided. The formatted output clearly identifies the contents of the tapes printed and the location of all items on the tape.

```
10 CALL CLEAR
20 REM TAPE RECORD PROGRAM - BASIC
30 REM ***** DATA INITIALIZATION *****
40 C0=1
50 M=1000
60 PRINT "SHALL I PRINT ALL ITEMS": "(Y OR N)?"
70 INPUT A0$
80 IF A0$="Y" THEN 160
90 PRINT "SHALL I SEARCH FOR A TAPE(T)": "ARTIST(A), OR SONG(S)?"
100 INPUT A1$
110 PRINT "ENTER THE ITEM TO SEARCH FOR"
120 INPUT X$
130 PRINT
140 PRINT
150 C0=0
160 REM ***** PROCESSING AREA *****
170 FOR I=1 TO M
180 READ T$
190 IF T$="END" THEN 390
200 IF T$<>"A" THEN 270
210 READ A$,P$,L$
220 IF A0$<>"Y" THEN 250
230 PRINT A$;TAB(2B);P$;TAB(44);L$:;
```

```

240 GOTO 380
250 GOSUB 440
260 GOTO 380
270 REM ***** TAPE MASTER ITEM PRINT *****
280 T1$=T$
290 READ S$
300 C=0
310 IF A0$<>"Y" THEN 380
320 PRINT
330 GOTO 340
340 PRINT "TAPE - ";T$;TAB(14);"SPEED - ";S$
350 PRINT
360 PRINT "ARTIST";TAB(28);"SONG";TAB(44);"LOCATION"
370 PRINT "-----"
380 NEXT I
390 REM ***** TERMINATION POINT *****
400 IF C0<>0 THEN 420
410 PRINT "ITEM NOT FOUND"
420 PRINT
430 STOP
440 REM ***** SELECTION PROCESSING AREA *****
450 IF A1$<>"T" THEN 580
460 IF T$<>"A" THEN 730
470 IF T1$<>X$ THEN 730
480 IF C>0 THEN 540
490 PRINT "TAPE - ";T1$;TAB(14);"SPEED - ";S$
500 PRINT
510 IF C0>0 THEN 540
520 PRINT "ARTIST";TAB(28);"SONG";TAB(44);"LOCATION"
530 PRINT "-----"
540 PRINT A$;TAB(28);P$;TAB(44);L$::
550 C0=C0+1
560 C=C+1
570 GOTO 730
580 IF A1$<>"A" THEN 660
590 IF A$<>X$ THEN 730
600 IF C0>0 THEN 640
610 PRINT "SONG";TAB(16);"TAPE";TAB(28);"ARTIST";TAB(44);"LOCATION"
620 PRINT "-----"
630 C0=C0+1
640 PRINT A$;TAB(16);T1$;TAB(28);P$;TAB(44);L$::
650 GOTO 730
660 IF A1$<>"S" THEN 730
670 IF P$<>X$ THEN 730
680 IF C0>0 THEN 720
690 PRINT "SONG";TAB(16);"TAPE";TAB(28);"ARTIST";TAB(44);"LOCATION"
700 PRINT "-----"
710 C0=C0+1
720 PRINT P$;TAB(16);T1$;TAB(28);A$;TAB(44);L$::
730 RETURN
740 REM ***** DATA ENTRIES FOLLOW *****
750 DATA 100,3 5/8
760 DATA A,SINGER 1,SONG 1,1
770 DATA A,SONGSTRESS 2,PIECE 2,2
780 DATA 101,7 1/2
790 DATA A,REDDY,NEWSONG,7523
800 DATA A,REDDY,OLD SONG,516
810 DATA A,ANDOTHER,NEWSONG,865
820 DATA TAPE 3,7 1/2
830 DATA A,REDDY,ANOTHER SONG,14
840 DATA A,SOMEONE,NEWSONG,56
850 DATA END

```

>RUN
 SHALL I PRINT ALL ITEMS
 (Y OR N)?
 ? Y

TAPE - 100 SPEED - 3 5/8

ARTIST SONG	LOCATION
SINGER 1 SONG 1	1
SONGSTRESS 2 PIECE 2	2

TAPE - 101 SPEED - 7 1/2

ARTIST SONG	LOCATION
REDDY NEWSONG	7523
REDDY OLD SONG	516
ANOTHER NEWSONG	865

TAPE - TAPE 3SPEED - 7 1/2

ARTIST SONG	LOCATION
REDDY ANOTHER SONG	14
SOMEONE NEWSONG	56

>RUN
 SHALL I PRINT ALL ITEMS
 (Y OR N)?
 ? N
 SHALL I SEARCH FOR A TAPE (T
)
 ARTIST(A), OR SONG(S)?
 ? S
 ENTER THE ITEM TO SEARCH FO
 R
 ? NEWSONG

SONG ARTIST	TAPE LOCATION
NEWSONG REDDY	101 7523
NEWSONG ANOTHER	101 865
NEWSONG SOMEONE	TAPE 3 56

MAJOR SYMBOL TABLE - RECORDING TAPES

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	M .. MAXIMUM NUMBER OF DATA READS	I
I	X\$.. ITEM TO SEARCH FOR	I
I	T\$.. TAPE NUMBER/TRANSACTION TYPE	I
I	A\$.. ARTIST	I
I	P\$.. SONG	I
I	L\$.. LOCATION ON TAPE	I
I	S\$.. TAPE SPEED	I
I	T1\$.. TEMPORARY TAPE NUMBER SAVE	I
I	-----	I

FUNCTIONS USED

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	TAB .. FORMATS PRINT LINES	I
I	-----	I

CLUB LISTS

Description

For the individual involved in club activities, this program can save hours of manual typing and calculation efforts.

Functions of the Program

The program reads club member information from the DATA statements and performs the requested processing. Processing requirements are determined by the option number entered. All options are separated in the program for clarity. The options available are:

1. Printing mailing labels
2. Computing and printing members' dues status
3. Printing a list of names and telephone numbers
4. Printing a member listing in checklist form

Instructions for Use

Enter and store the member information, prior to the program's use.

Data Entry

All data is entered by means of DATA statements.

Data Formats

1. The first data record contains spacing and dues information:
Lines to print per address, Dues required for each period
2. Individual member information is entered in the form:
Name, Telephone, Street, City-State-Zip code, Dues paid

Output Description

See examples provided. Option choices determine the format of the output produced.

```
10 CALL CLEAR
20 REM CLUB LISTING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=10000
50 PRINT
60 PRINT
70 PRINT " FOUR OPTIONS ARE AVAILABLE"
80 PRINT TAB(5);"1. PRINT IN MAILING";TAB(8);"LABEL FORMAT"
90 PRINT TAB(5);"2. PRINT OF MEMBER'S";TAB(8);"DUES STATUS"
100 PRINT TAB(5);"3. PRINT OF NAMES AND";TAB(8);"TELEPHONES"
110 PRINT TAB(5);"4. PRINT IN CHECKLIST";TAB(8);"FORMAT"
120 PRINT
130 PRINT "ENTER OPTION NUMBER DESIRED"
140 INPUT D
150 REM ***** ENTRY OF NUMBER TO PRINT *****
160 N1=3
170 READ N2,D
180 REM ***** PROCESSING STARTS *****
190 PRINT "POSITION PAPER NOW"
```

```

200 INPUT G$
210 PRINT :::::
220 FOR I=1 TO M
230 READ N$
240 IF N$="END" THEN 600
250 READ T$,A1$,A2$,P
260 IF O=1 THEN 370
270 IF O=2 THEN 450
280 IF O=3 THEN 530
290 REM ***** OPTION 4 *****
300 IF I<>1 THEN 330
310 PRINT "CHK";TAB(8);"NAME/ADDRESS";TAB(36);"TELEPHONE"
320 PRINT "-----"
330 PRINT "( ) ";N$
340 PRINT TAB(8);A1$;TAB(36);A2$;TAB(8);T$
350 PRINT
360 GOTO 580
370 REM ***** OPTION 1 *****
380 PRINT N$
390 PRINT A1$
400 PRINT A2$
410 FOR K=N1+1 TO N2
420 PRINT
430 NEXT K
440 GOTO 580
450 REM ***** OPTION 2 *****
460 IF I<>1 THEN 490
470 PRINT "NAME";TAB(20);"QWED"
480 PRINT "-----"
490 T1=D-P
500 T2=T2+T1
510 PRINT N$;TAB(20);T1
520 GOTO 580
530 REM ***** OPTION 3 *****
540 IF I<>1 THEN 570
550 PRINT "NAME";TAB(20);"TELEPHONE"
560 PRINT "-----"
570 PRINT N$;TAB(20);T$
580 NEXT I
590 REM *****
600 REM ***** TERMINATION POINT *****
610 IF O<>2 THEN 640
620 PRINT TAB(20);"-----"
630 PRINT TAB(5);"TOTAL QWED ";TAB(20);T2
640 PRINT
650 PRINT I-1;" RECORDS WERE PRINTED"
660 PRINT
670 PRINT
680 STOP
690 REM *****
700 REM ***** EXAMPLE DATA FORMATION FOLLOWS*****
710 REM *****
720 DATA 6,15
730 DATA JOHN D. DOE,243-1234
740 DATA 555 SMOKEY DRIVE
750 DATA "GROTON,MASS 87878"
760 DATA 12.00
770 DATA JOSEPH R. WESTONBY,345-2345
780 DATA 456 EASERLY ROAD
790 DATA "TAYLORSVILLE,MAINE 23234"
800 DATA 11
810 DATA END

```

>RUN

- FOUR OPTIONS ARE AVAILABLE
1. LABEL INFORMATION MAILING
 2. PRINT STATE MEMBER'S
 3. PRINT STATUS NAMES AND
 4. TELEPHONE CHECKLIST

ENTER OPTION NUMBER DESIRED
 POSITION PAPER NOW

JOHN D. DOE
 1000 S. MAIN ST.
 RICHMOND, VA 23220

JOSEPH R. WESTONBY
 1000 S. MAIN ST.
 RICHMOND, VA 23220

2 RECORDS WERE PRINTED

>RUN

- FOUR OPTIONS ARE AVAILABLE
1. LABEL INFORMATION MAILING
 2. PRINT STATE MEMBER'S
 3. PRINT STATUS NAMES AND
 4. TELEPHONE CHECKLIST

ENTER OPTION NUMBER DESIRED
 POSITION PAPER NOW

NAME	DWED
JOHN D. DOE	3
JOSEPH R. WESTONBY	4
TOTAL DWED	7

2 RECORDS WERE PRINTED

>RUN

- FOUR OPTIONS ARE AVAILABLE
1. LABEL INFORMATION MAILING
 2. PRINT STATE MEMBER'S
 3. PRINT STATUS NAMES AND
 4. TELEPHONE CHECKLIST

ENTER OPTION NUMBER DESIRED
 POSITION PAPER NOW

NAME	TELEPHONE
JOHN D. DOE	243-1234
JOSEPH R. WESTONBY	345-2345

2 RECORDS WERE PRINTED

>RUN

- FOUR OPTIONS ARE AVAILABLE
1. OPTION NUMBER
 2. MEMBER'S
 3. NAMES AND
 4. CHECKLIST

ENTER OPTION NUMBER DESIRED

POSITION PAPER NOW

CHK NAME / ADDRESS
 TELEPHONE

() JOHN D. DOE
 249-1234 87878
 249-1234 DRIVE

() JOSEPH R. WESTONBY
 456 EASERLY ROAD
 TAYLORSVILLE, MAINE 23234
 345-2345

2 RECORDS WERE PRINTED

MAJOR SYMBOL TABLE - CLUB LISTS

I	NAME	DESCRIPTION	I
I	M	MAXIMUM NUMBER OF DATA READS	I
I	O	OPTION NUMBER	I
I	N1	LINES IN EACH ADDRESS	I
I	N2	LINES TO PRINT FOR EACH ADDRESS	I
I	D	REQUIRED DUES FOR PERIOD	I
I	N\$	NAME	I
I	T\$	TELEPHONE	I
I	A1\$	ADDRESS LINE 1	I
I	A2\$	ADDRESS LINE 2	I
I	P	DUES PAID FOR PERIOD	I
I	T1	DUES OWED	I
I	T2	TOTAL DUES OWED - ALL	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	FORMATS PRINT LINES	I

TABLE OF CONTENTS

Description

This program can satisfy a number of school, hobby, and home needs. With a little thought, it can be applied to everything from creating outlines for school to recording the contents of your program cassettes.

Functions of the Program

The program will either locate and print specific items from the data items or produce a formatted listing with user-controlled indentation.

Instructions for Use

Determine the level number (for indentation) for each of the items, and enter the information prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The form for data entry is:

Item level, Item, Page number/Location

Note the 0 END card.

Output Description

See example provided. Output is produced with indentation based upon five spaces multiplied by the level number supplied with the item.

```
10 CALL CLEAR
20 REM TABLE OF CONTENTS (LOCATOR) PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 T1=20
50 T2=20
60 M=1000
70 PRINT "SHALL I PRINT ALL ENTRIES":"(Y OR N)?"
80 INPUT A$
90 PRINT
100 IF A$="Y" THEN 130
110 PRINT "ENTER THE ITEM TO SEARCH FOR"
120 INPUT X$
130 PRINT
140 PRINT
150 PRINT
160 PRINT
170 PRINT TAB(3); "ITEM"; TAB(T1); "LOCATION"
180 PRINT "-----"
190 REM
200 REM *****
210 REM ***** PROCESSING AREA *****
220 FOR I=1 TO M
230 READ T
240 IF T=0 THEN 510
250 READ I$,R$
260 IF T<>1 THEN 300
270 S1$=I$
```

```

280 S2$=R$
290 T1=20
300 IF A$<>"Y" THEN 370
310 PRINT TAB(2);I$;
320 IF R$="" THEN 350
330 PRINT TAB(T1);"- ";R$
340 T1=20
350 PRINT
360 GOTO 490
370 IF T<>1 THEN 390
380 PRINT
390 IF I$<>X$ THEN 490
400 PRINT TAB(2);S1$;
410 IF S2$="" THEN 440
420 PRINT TAB(T2);"- ";S2$;
430 IF T=1 THEN 480
440 PRINT
450 PRINT TAB(T*1);I$;
460 IF R$="" THEN 480
470 PRINT TAB(T1);"- ";R$;
480 PRINT
490 T1=23
500 NEXT I
510 REM ***** PROGRAM TERMINATION POINT *****
520 PRINT
530 PRINT
540 PRINT
550 STOP
560 REM *****
570 REM ***** DATA ENTRIES FOLLOW *****
580 DATA 1,TAPE 1,RACK 1
590 DATA 2,FINANCIAL PROGRAMS,
600 DATA 3,CHECKBOOK BALANCE,132
610 DATA 3,HOUSEHOLD EXPENSES,240
620 DATA 3,INTEREST PROJECTIONS,356
630 DATA 3,STOCK ANALYSIS,762
640 DATA 2,TUTORS,
650 DATA 3,MATH ADDITION,850
660 DATA 3,MATH SUBTRACTION,1000
670 DATA 1,TAPE 2,RACK 1
680 DATA 2,KITCHEN,
690 DATA 3,DIET,10
700 DATA 3,DIET PLANNING,457
720 DATA 3,SCHEDULES,25
730 DATA 1,TAPE 3,RACK 2
740 DATA 3,DIET,123
750 DATA 0

```

```

>RUN
SHALL I PRINT ALL ENTRIES
(Y OR N)?
? Y

```

ITEM	LOCATION
TAPE 1	- RACK 1
FINANCIAL PROGRAMS	
CHECKBOOK BALANCE	- 132
HOUSEHOLD EXPENSES	- 240
INTEREST PROJECTIONS	- 356
STOCK ANALYSIS	- 762
TUTORS	
MATH ADDITION	- 850

MATH SUBTRACTION - 1000
 TAPE 2 - RACK 1
 KITCHEN
 DIET - 10
 DIET PLANNING - 457
 SCHEDULES - 25
 TAPE 3 - RACK 2
 DIET - 123

MAJOR SYMBOL TABLE - TABLE OF CONTENTS

I	NAME	.. DESCRIPTION	I
I	T1	.. TAB CONTROL USE	I
I	T2	.. TAB CONTROL USE	I
I	X\$	.. ITEM TO SEARCH FOR	I
I	T	.. NUMBER OF SPACES TO TAB - IN	I
I	I\$	.. ITEM IN	I
I	R\$	.. PAGE NUMBER/REFERENCE LOCATION IN	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I

6

Miscellaneous Programs for the Home

Utility Bill Analysis
Health Records
Bulletin Board
School Grade Recording
Achievement Recording
Calendars
Multiple Prints
Paper Route—Basic Version
Paper Route—Extended Version
Weight Control
Household Inventory

UTILITY BILL ANALYSIS

Description

The rising cost and dwindling supply of energy indicates the need for careful control and analysis of energy usage. This program was designed to assist with these tasks.

Functions of the Program

The program accepts periodic readings of any utility meter and computes daily use and cost information. Totals and averages for the period are produced after all data items have been processed and printed in a tabular form.

Instructions for Use

Determine the unit cost of the energy use from your statement. Read the meter and enter the information to the program, as frequently as possible. Daily readings are best for thorough interpretation of the results.

Data Entry

All data is entered as DATA statements.

Data Formats

The first record provided is the cost per unit of the item. The second and succeeding records are of the form:

Date of reading, Meter reading

Output Description

See example provided.

```
10 CALL CLEAR
20 REM UTILITY ANALYSIS PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 REM *****
60 REM ***** PROCESSING AREA *****
70 PRINT
80 PRINT
90 PRINT
100 READ C
110 READ D,S
120 PRINT "INITIAL READING WAS";S;"ON DAY";D
130 PRINT "COST PER UNIT IS ";C
140 PRINT
150 PRINT "DATE";TAB(17);"USE COST"
160 PRINT "READ";TAB(6);"READ";TAB(11);"USED";TAB(17);"THIS DAY"
170 PRINT "-----";TAB(6);"-----";TAB(11);"-----";TAB(17);"-----"
180 T2=S
190 D2=D
200 FOR I=1 TO M
210 N=1
220 READ D
230 IF D=0 THEN 380
```


MAJOR SYMBOL TABLE - UTILITY BILL ANALYSIS

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I M	.. MAXIMUM NUMBER OF DATA READS
I C	.. COST PER UNIT
I D	.. INITIAL READING DAY
I S	.. INITIAL READING
I R	.. READING
I TO	.. UNITS USED
I T1	.. COST PER DAY
I N1	.. DAY COUNT
I T4	.. TOTAL USE
I T3	.. TOTAL COST
I-----I	

FUNCTIONS USED

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I TAB	.. FORMATS PRINT LINES
I-----I	

HEALTH RECORDS

Description

Maintaining family health histories and immunization information is frequently a source of difficulty in many households. With this program to assist you, the task may be simplified.

Functions of the Program

The program reads the various data items provided and prints either all items or only those for the specified individual. Note that the processing of the data for the two printing options has been totally separated for your ease of interpretation and modification, if desired.

Instructions for Use

Data items should be provided for illnesses and immunizations prior to running the program. New items should be added as they occur.

Data Entry

All data is entered using DATA statements.

Data Format

The format for all data is:

Individual's name, Month-Day-Year, Type code, Description

Type codes are specified during data initialization.

Output Description

See examples provided. Two forms of output are available.

```
10 CALL CLEAR
20 REM HEALTH RECORD RECORDING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M1=3
50 DIM C0$(3)
60 DIM C1$(4)
70 C0$(1)="IM"
80 C1$(1)="IMMUNIZATION"
90 C0$(2)="V"
100 C1$(2)="VISITED DOCTOR"
110 C0$(3)="IL"
120 C1$(3)="ILLNESSES"
130 C1$(4)=" "
140 M=1000
150 PRINT "SHALL I PRINT ALL OF THE":"ITEMS (Y OR N)";
160 INPUT A$
170 IF A$<>"N" THEN 240
180 PRINT "ENTER THE NAME TO SELECT"
190 INPUT X$
200 PRINT
210 PRINT
220 PRINT
230 GOTO 500
240 PRINT "WOULD LIKE THE RECORDS IN":"ENTRY ORDER (E) OR SORTED(S)"
```

```

250 INPUT A1$
260 PRINT
270 PRINT
280 PRINT
290 IF A1$="S" THEN 680
300 REM *****
310 REM ***** PRINT OF ALL ITEMS IN ENTRY ORDER *****
320 PRINT "NAME";TAB(17);"DATE";TAB(45);"DESCRIPTION"
330 PRINT "-----"
340 REM
350 FOR I=1 TO M
360 READ N$
370 IF N$="END" THEN 450
380 READ D$,C$,I$
390 FOR K=1 TO M1
400 IF C$=C0$(K) THEN 420
410 NEXT K
420 PRINT N$;TAB(17);D$;TAB(28);C1$(K);TAB(45);I$;:
430 NEXT I
440 REM *****
450 REM ***** TERMINATION POINT *****
460 PRINT
470 PRINT
480 STOP
490 REM *****
500 REM ***** PRINT OF SELECTED RECORDS *****
510 PRINT "NAME";TAB(17);"DATE";TAB(45);"DESCRIPTION"
520 PRINT "-----"
530 REM
540 FOR I=1 TO M
550 READ N$
560 IF N$="END" THEN 450
570 READ D$,C$,I$
580 IF N$<>X$ THEN 650
590 FOR K=1 TO M1
600 IF C$=C0$(K) THEN 640
610 NEXT K
620 IF J>1 THEN 640
630 N$=" "
640 PRINT N$;TAB(17);D$;TAB(28);C1$(K);TAB(45);I$;:
650 NEXT I
660 GOTO 450
670 REM *****
680 REM ***** PRINT OF ITEMS IN SELECTED ORDER *****
690 PRINT "NAME";TAB(17);"DATE";TAB(45);"DESCRIPTION"
700 PRINT "-----"
710 REM
720 I=1
730 FOR J=1 TO M
740 READ N$
750 IF N$="END" THEN 940
760 READ D$,C$,I$
770 IF J>I THEN 880
780 IF J<I THEN 930
790 S$=N$
800 IF I=1 THEN 880
810 RESTORE
820 FOR K=1 TO J
830 READ N$,D$,C$,I$
840 IF S$<>N$ THEN 860
850 C=C+1
860 NEXT K
870 IF C>1 THEN 940
880 IF N$<>S$ THEN 930
890 FOR K=1 TO M1
900 IF C$=C0$(K) THEN 920
910 NEXT K
920 PRINT S$;TAB(17);D$;TAB(28);C1$(K);TAB(45);I$;:
930 NEXT J
940 RESTORE

```

```

950 C=0
960 IF I>1 THEN 980
970 M=J-1
980 PRINT
990 I=I+1
1000 IF I<=M THEN 730
1010 GOTO 450
1020 REM *****
1030 REM ***** DATA ENTRIES FOLLOW *****
1040 DATA ED,JUL 1 1967,IM,DPT #1 SHOT
1050 DATA ED,AUG 1 1967,IM,DPT #2 SHOT
1060 DATA JIM,SEP 1 1967,IM,TETANUS SHOT
1070 DATA ED,NOV 1 1967,IM,DPT #3 SHOT
1080 DATA JIM,JAN 1 1968,IL,CHICKEN POX
1090 DATA ED,JAN 14 1968,IL,CHICKEN POX
1100 DATA JEAN,JAN 15 1968,IL,CHICKEN POX
1110 DATA JIM,JUN 1 1968,V,CHECK-UP
1120 DATA END

```

```

>RUN
SHALL I PRINT ALL OF THE
ITEMS (Y OR N)? Y
WOULD LIKE THE RECORDS IN
ENTRY ORDER (E) OR SORTED(S)
? E

```

NAME	DATE	DESCRIPTION
ED	JUL 1 1967	IMMUNIZATION DPT #1 SHOT
ED	AUG 1 1967	IMMUNIZATION DPT #2 SHOT
JIM	SEP 1 1967	IMMUNIZATION TETANUS SHOT
ED	NOV 1 1967	IMMUNIZATION DPT #3 SHOT
JIM	JAN 1 1968	ILLNESSES CHICKEN POX
ED	JAN 14 1968	ILLNESSES CHICKEN POX
JEAN	JAN 15 1968	ILLNESSES CHICKEN POX
JIM	JUN 1 1968	VISITED DOCTOR CHECK-UP

```

>RUN
SHALL I PRINT ALL OF THE
ITEMS (Y OR N)? N
ENTER THE NAME TO SELECT
? JIM

```

NAME	DATE	DESCRIPTION
JIM	SEP 1 1967	IMMUNIZATION TETANUS SHOT

JIM JAN 1 1968
ILLNESSES CHICKEN POX

JIM JUN 1 1968
VISITED DOCTOR CHECK-UP

MAJOR SYMBOL TABLE - HEALTH RECORDS

```
I-----I
I NAME    .. DESCRIPTION                    I
I-----I
I CO$( ) .. MASTER CATEGORY CODE ARRAY    I
I C1$( ) .. MASTER CATEGORY DESCRIPTION    I
I M       .. MAXIMUM NUMBER OF DATA READS I
I X$      .. NAME TO SELECT                I
I N$      .. NAME IN                        I
I D$      .. DATE IN                        I
I I$      .. DESCRIPTION IN                I
I C$      .. CATEGORY CODE IN              I
I-----I
```

FUNCTIONS USED

```
I-----I
I NAME    .. DESCRIPTION                    I
I-----I
I TAB     .. FORMAT PRINT LINES            I
I DIM     .. SINGLE DIMENSION ARRAYS       I
I-----I
```

BULLETIN BOARD

Description

A computer never forgets. This program allows the storage of notes and reminders for family members.

Functions of the Program

The program searches the data items and identifies messages and the individual they they are directed to. It prints the messages when requested.

Instructions for Use

Messages must be recorded in DATA statements and deleted as their usefulness passes. Avoid the use of commas (,) in the message text.

Data Entry

All data is entered by means of DATA statements.

Data Format

All messages are entered in the following form:

* , Individual directed to, Message contents, Message initiator

Output Description

See example provided. Message is free-form, without restrictions (except for potential formatting problems caused by commas).

```
10 CALL CLEAR
20 REM BULLETIN BOARD PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 REM ***** PROCESSING AREA *****
60 FOR I=1 TO M
70 READ T$
80 IF T$="END" THEN 250
90 IF T$(">") THEN 240
100 READ I$
110 PRINT "MESSAGE FOR ";I$;" SHOULD":I PRINT IT(Y OR N);
120 INPUT A$
130 IF A$(">") THEN 70
140 PRINT
150 READ T$
160 IF T$="END" THEN 250
170 IF T$(">") THEN 220
180 PRINT
190 PRINT "END OF MESSAGE - I'LL LOOK":FOR OTHERS"
200 PRINT
210 GOTO 100
220 PRINT T$;" ";
230 GOTO 150
240 NEXT I
250 REM ***** PROGRAM TERMINATION POINT *****
260 PRINT
270 PRINT
280 STOP
290 REM *****
300 REM ***** DATA ENTRIES FOLLOW *****
```

```

310 DATA *,JIM,MOM HAS GONE TO THE STORE BE BACK AT 6,GEORGE
320 DATA *,JOAN,FEED THE DOG BEFORE YOU LEAVE THE HOUSE
330 DATA AFTER SCHOOL.HER FOOD IS IN THE PANTRY
340 DATA MOM
350 DATA *,ALL,
360 DATA I HAVE GONE TO THE HARDWARE STORE BE BACK AT 6
370 DATA DAD
380 DATA END

```

```

>RUN
MESSAGE FOR JIM SHOULD
I PRINT IT<Y OR N>? Y
MOM HAS GONE TO THE STORE BE
BACK AT 6,GEORGE
END OF MESSAGE - I'LL LOOK
FOR OTHERS
MESSAGE FOR JOAN SHOULD
I PRINT IT<Y OR N>? N
MESSAGE FOR ALL SHOULD
I PRINT IT<Y OR N>? Y
I HAVE GONE TO THE HARDWARE
STORE BE BACK AT 6 DAD

```

MAJOR SYMBOL TABLE - BULLETIN BOARD

```

I-----I
I NAME    .. DESCRIPTION                      I
I-----I
I M       .. MAXIMUM NUMBER OF DATA READS  I
I T$     .. CODE/TEXT                        I
I I$     .. NAME OF MESSAGE RECIPIENT       I
I-----I

```

SCHOOL GRADE RECORDING

Description

This program maintains course grade information for the review of academic status between report cards and provides continual progress analysis.

Functions of the Program

This program will print all information entered (in course sequence) or will print the grades associated with a specified course only. Courses and grading devices are initiated prior to reading the grade data items. Note the sample data provided.

Instructions for Use

Determine the number of courses to be monitored, and enter this number and the course names as the first data record. Following this, determine the number of grading devices (tests, homework, etc.) that will be recorded, and enter this information as the second data record. Grades for course activities can then be entered and reviewed as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

The first two data records initialize the course and grading device information. Their form is:

Number of courses, Course code, Course name, . . .

Number of devices, Device code, Device name, . . .

For each of these forms the codes and names are repeated for the number of times specified. Course grade information can then be entered in the form:

Course code, Device code, Number score, Letter grade, Date

Output Description

See example provided.

Suggested Enhancements

If your school system is consistent in its grading policies, an ideal enhancement would be the computation of current averages during the semester.

```

10 CALL CLEAR
20 REM SCHOOL GRADE RECORDING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 DIM C$(20)
50 DIM C1$(20)
60 DIM T$(20)
70 DIM T1$(20)
80 PRINT "SHALL I PRINT ALL ENTRIES:"(Y OR N)";
90 INPUT A$
100 P=1
110 K=1
120 IF A$<>"N" THEN 240
130 PRINT "ENTER THE COURSE TO PRINT"
140 INPUT C3$
150 READ N
160 FOR I=1 TO N
170 READ C$(I),C1$(I)
180 IF C3$=C1$(I) THEN 230
190 NEXT I
200 PRINT "COURSE NOT FOUND"
210 RESTORE
220 GOTO 80
230 K=I
240 PRINT
250 RESTORE
260 PRINT
270 PRINT
280 REM ***** PROCESSING AREA *****
290 READ N
300 FOR I=1 TO N
310 READ C$(I),C1$(I)
320 NEXT I
330 READ N2
340 FOR I=1 TO N2
350 READ T$(I),T1$(I)
360 NEXT I
370 PRINT C1$(K)
380 READ C0$
390 IF C0$="END" THEN 470
400 READ T0$,S,G$,D$
410 IF C0$<>C$(K) THEN 380
420 FOR J=1 TO N2
430 IF T$(J)=T0$ THEN 450
440 NEXT J
450 PRINT TAB(P);S;"(";G$;") ";T1$(J);" - ";D$
460 GOTO 380
470 PRINT
480 RESTORE
490 PRINT
500 K=K+1
510 IF A$<>"Y" THEN 530
520 IF K<=N THEN 280
530 REM ***** PROGRAM TERMINATION POINT *****
540 PRINT
550 PRINT
560 STOP
570 REM *****
580 REM ***** DATA ENTRIES FOLLOW *****
590 DATA S,E,ENGLISH,B,BIOLOGY,H,HISTORY,F,FRENCH,A,ALGEBRA
600 DATA 3,H,HOMESWORK,T,TEST,Q,QUIZ
610 REM ***** GRADE DATA FOLLOWS *****
620 DATA E,H,78,C,JUNE 8
630 DATA F,T,89,B+,JUNE 9
640 DATA E,H,84,B,JUNE 11
650 DATA B,T,95,A,JUNE 12
660 DATA H,H,85,B,JUNE 14
670 DATA END

```



```
> RUN
  ^OR UN
  ^Y CH I N) ? PRINT ALL ENTRIES
```

```
ENGLISH
84 (C) HOMEWORK - JUNE 8
  (B) HOMEWORK - JUNE 11
```

```
BIOLOGY
95 (A) TEST - JUNE 12
```

```
HISTORY
85 (B) HOMEWORK - JUNE 14
```

```
FRENCH
89 (B+) TEST - JUNE 9
```

```
ALGEBRA
```

```
> RUN
  ^OR UN
  ^Y CH I N) ? PRINT ALL ENTRIES
  ^Y CH I N) ? COURSE TO PRINT
```

```
ENGLISH
84 (C) HOMEWORK - JUNE 8
  (B) HOMEWORK - JUNE 11
```

MAJOR SYMBOL TABLE - SCHOOL GRADE RECORDING

```
I-----I
I NAME .. DESCRIPTION I
I-----I
I C$( ) .. MASTER COURSE CODE ARRAY I
I C1$( ) .. MASTER COURSE NAME ARRAY I
I T$( ) .. MASTER TYPE CODE ARRAY I
I T1$( ) .. MASTER TYPE DESCRIPTION ARRAY I
I P .. TAB CHARACTER I
I K .. POINTER TO SELECTED COURSE I
I C3$ .. COURSE TO PRINT I
I N .. NUMBER OF COURSES RECORDED I
I N2 .. NUMBER OF TYPES RECORDED I
I T0$ .. TRANSACTION TYPE IN I
I S .. TRANSACTION NUMBER GRADE IN I
I G$ .. TRANSACTION LETTER GRADE IN I
I D$ .. TRANSACTION DATE IN I
I CO$ .. TRANSACTION COURSE IN I
I-----I
```

FUNCTIONS USED

```
I-----I
I NAME .. DESCRIPTION I
I-----I
I TAB .. FORMAT PRINT LINES I
I DIM .. SINGLE DIMENSION ARRAYS I
I-----I
```

ACHIEVEMENT RECORDING

Description

This program monitors progress toward satisfying the requirements necessary to achieve a goal. An ideal application is recording progress toward the completion of Scouting requirements for progression to the next rank.

Functions of the Program

The program determines the number of individuals (or groups) that will be recorded. Following this, the achievement requirements and the individual's status on each item is read, interpreted, and printed.

Instructions for Use

Enter the number of individuals recorded, followed by their names. Achievements and requirements are then determined and entered, followed by a status indicator for each individual.

Data Entry

All data is entered by means of DATA statements.

Data Formats

1. The first data item initializes the individual's names:
Number of individuals recorded, Individual's names,
2. Each achievement (goal) is then identified by the form:
*, Achievement name
3. The requirements for attaining each goal and the status of progress toward that goal is entered in the following form:
Requirement, Status codes, (one for each individual)

Output Description

See example provided.

Suggested Enhancements

The status indicators are ideal candidates for storage on disk or tape-storage devices.

```
10 CALL CLEAR
20 REM ACHIEVEMENT RECORDING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 DIM N$(10)
50 DIM S$(10)
60 M=10000
70 READ N
80 FOR I=1 TO N
90 READ N$(I)
100 NEXT I
110 PRINT
```

```

120 PRINT
130 PRINT
140 REM ***** PROCESSING AREA *****
150 PRINT "ACHIEVEMENT/REQUIREMENT";:;
160 FOR K=1 TO N
170 PRINT TAB((K-1)*7+30);N$(K);
180 NEXT K
190 PRINT
200 PRINT "-----";
210 FOR K=1 TO N
220 REM
230 NEXT K
240 PRINT
250 FOR I=1 TO M
260 READ T$
270 IF T$="END" THEN 420
280 IF T$<>"*" THEN 340
290 READ A$
300 PRINT
310 PRINT A$
320 PRINT
330 GOTO 410
340 PRINT T$;
350 FOR K=1 TO N
360 S$(K)=" "
370 READ S$(K)
380 PRINT TAB((K-1)*7+30);"(";S$(K);")";
390 NEXT K
400 PRINT
410 NEXT I
420 REM ***** PROGRAM TERMINATION POINT *****
430 PRINT
440 PRINT
450 STOP
460 REM *****
470 REM ***** DATA ENTRIES FOLLOW *****
480 DATA 3,JIM,CHUCK,JACK
490 DATA *,OUTDOORSMAN
500 DATA BUILDING A CAMPFIRE
510 DATA Y,N,Y
520 DATA SWIMMING 3 LAPS
530 DATA Y,Y,N
540 DATA CAMPING OVERNIGHT
550 DATA Y,Y,Y
560 DATA *,CRAFTSMAN
570 DATA BUILDING A BOOKCASE
580 DATA N,N,N
590 DATA REPAIRING A BENCH
600 DATA Y,N,N
610 DATA END

```

>RUN

```

ACHIEVEMENT/REQUIREMENT
_JIM   _CHUCK  _JACK
-----
OUTDOORSMAN
BUILDING A CAMPFIRE
<Y>    <N>    <Y>
SWIMMING <3> LAPS <Y>
<Y>    <Y>    <N>
CAMPING OVERNIGHT
<Y>    <Y>    <Y>
CRAFTSMAN
BUILDING A BOOKCASE
<N>    <N>    <N>
REPAIRING A BENCH
<Y>    <N>    <N>

```

MAJOR SYMBOL TABLE - ACHIEVEMENT RECORDING

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I N\$()	.. NAMES OF PEOPLE ENTERED
I S\$	.. COMPLETION CODE INDICATOR ARRAY
I M	.. MAXIMUM NUMBER OF DATA READS
I N	.. NUMBER OF PEOPLE RECORDED
I A\$	.. ACHIEVEMENT
I T\$	.. CODE IN/TEXT
I-----I	

FUNCTIONS USED

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I TAB	.. FORMATS PRINT LINES
I DIM	.. SINGLE DIMENSION ARRAYS
I-----I	

CALENDARS

Description

You'll never need to buy another calendar with this program that produces calendars for any month or year in a form that permits writing in comments.

Functions of the Program

The program's functions are primarily directed toward the printing of a nicely formatted calendar. Each major printing function is separated into an independent module for clarity and your extension or modification.

Instructions for Use

Run the program.

Data Entry

Not applicable. The starting month and year, and the number of months to be printed, are entered in response to program requests.

Data Format

Not applicable.

Output Description

See example provided. The number of months printed is determined during the program's execution.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM CALENDAR PRODUCING PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER FOLLOWS *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=8"
60 REM ***** DATA INITIALIZATION *****
70 N=0
80 S0=0
90 L0=0
100 M1=7
110 M2=7
120 M4=1
130 DIM D0$(7)
140 DIM NO(12)
150 DIM M0$(12)
160 READ D0$(1),D0$(2),D0$(3),D0$(4),D0$(5),D0$(6),D0$(7)
170 FOR I=1 TO 12
180 READ M0$(I),NO(I)
190 NEXT I
200 PRINT "ENTER THE FIRST MONTH AND":"YEAR TO BE PRINTED I.E.,":"JAN,1980"
210 INPUT M$,Y1
220 PRINT "ENTER THE DAY OF THE WEEK":"THAT THE FIRST MONTH":"STARTS ON"
230 INPUT D1$
240 PRINT "ENTER THE NUMBER OF MONTHS":"TO BE PRINTED I.E., 10"
250 INPUT N
260 PRINT "DO YOU WANT PAGE ALIGHMENT":"(Y OR N)?"
```

```

270 INPUT A1$
280 IF A1$<>"Y" THEN 310
290 PRINT "BEFORE THE PRINTING OF EACH":"MONTH A '?' WILL APPEAR"
300 PRINT "ALIGN TO THE TOP OF PAGE":"BEFORE PRESSING ENTER"
310 FOR I=1 TO 12
320 IF M$(I) THEN 340
330 M4=I
340 NEXT I
350 FOR K=1 TO 7
360 IF D1$(K) THEN 380
370 S0=K
380 NEXT K
390 REM *****
400 REM ***** PROCESSING LOOP *****
410 FOR I2=M4 TO M4+N-1
420 N0(2)=28
430 Y=Y1
440 IF INT(Y/4)<>Y/4 THEN 460
450 N0(2)=29
460 IO=0
470 M3=I2
480 IF M3<=12 THEN 540
490 M3=M3-12
500 Y=Y1+1
510 IF INT(Y/4)<>Y/4 THEN 530
520 N0(2)=29
530 GOTO 480
540 IF S0=0 THEN 650
550 GOSUB 720
560 FOR J=1 TO M2
570 GOSUB 820
580 IF N0(M3)<IO THEN 640
590 GOSUB 880
600 GOSUB 1140
610 GOSUB 1140
620 LO=LO+1
630 NEXT J
640 REM ***** PROGRAM TERMINATION POINT *****
650 IF S0<>8 THEN 670
660 S0=1
670 NEXT I2
680 PRINT
690 PRINT
700 STOP
710 REM ***** SUBROUTINE FOLLOWS *****
720 REM ***** PRINTS HEADINGS *****
730 IF A1$<>"Y" THEN 750
740 INPUT X$
750 PRINT #1
760 PRINT #1:" ";M0$(M3);" ";Y
770 FOR I=1 TO 7
780 PRINT #1:" ";D0$(I);" ";
790 NEXT I
800 PRINT #1
810 RETURN
820 REM ***** PRINTS SCHEDULE OUTLINE *****
830 FOR I=1 TO M1
840 PRINT #1:"I-----";
850 NEXT I
860 PRINT #1:"I"
870 RETURN
880 REM ***** PRINTS CALENDAR DAY LINE *****
890 FOR I=1 TO M1
900 IF J<>1 THEN 930
910 IF I<>S0 THEN 930
920 IO=1
930 IF N0(M3)>=IO THEN 970
940 PRINT #1:"I ";
950 IO=IO+1
960 GOTO 1090

```


MAJOR SYMBOL TABLE - CALENDARS

I	NAME	DESCRIPTION	I
I	N	NUMBER OF MONTHS TO PRINT	I
I	M1	MAXIMUM HORIZONTAL PRINT	I
I	DO\$()	DAY OF WEEK ARRAY	I
I	NO()	DAYS IN MONTH ARRAY	I
I	MO\$()	MONTH NAME ARRAY	I
I	M\$	FIRST MONTH TO PRINT	I
I	Y1	FIRST YEAR TO PRINT	I
I	D1\$	DAY OF WEEK MONTH STARTS ON	I
I	IO	DAY OF MONTH	I
I	Y	YEAR FOR PRINTING	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	INT	CONVERTS NUMBER TO INTEGER	I
I	DIM	SINGLE DIMENSION ARRAYS	I

MULTIPLE PRINTS

Description

This program will assist in the solution of the problem associated with producing multiple copies of a single item.

Functions of the Program

The program accepts text from DATA items and prints the number of copies, and in the form, specified.

Instructions for Use

Format your information, and enter it as data prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format for data entry is free-form. Note that commas will affect formatting.

Output Description

See example provided. The form, spacing, and number of copies is determined by your response to the program's questions.

```
10 CALL CLEAR
20 REM MULTIPLE LIST PROGRAM
30 REM ***** PROCESSING AREA *****
40 PRINT "HOW MANY COPIES OF THE ITEM": "ARE TO BE PRINTED?"
50 INPUT C
60 PRINT "DO YOU WANT TO ALIGN TO TOP": "OF PAGE BETWEEN PRINTS": "(Y OR N)?"
70 INPUT A$
80 IF A$ <> "Y" THEN 150
90 PRINT "ENTER THE NUMBER OF LINES": "PER PAGE"
100 INPUT L0
110 PRINT "ENTER THE NUMBER OF SPACES FROM THE TOP FOR PRINTING"
120 INPUT S
130 L=S
140 GOTO 170
150 PRINT "HOW MANY SPACES BETWEEN": "PRINTS"
160 INPUT S
170 PRINT "ALIGN PAPER AND PRESS": "ENTER (I'LL SPACE"; S; ": "SPACES)"
180 INPUT G$
190 FOR J=1 TO S
200 PRINT
210 NEXT J
220 FOR I=1 TO C
230 READ T$
240 IF T$="END" THEN 280
250 PRINT T$
260 L=L+1
270 GOTO 230
280 REM ***** END OF A PRINT *****
290 IF A$="Y" THEN 340
300 FOR J=1 TO S
```

```

310 PRINT
320 NEXT J
330 GOTO 380
340 FOR J=L TO LO+S
350 PRINT
360 NEXT J
370 L=S
380 RESTORE
390 NEXT I
400 REM *****
410 REM ***** PROGRAM TERMINATION POINT *****
420 PRINT
430 PRINT
440 PRINT
450 STOP
460 REM *****
470 REM ***** TEXT FOR PRINTING FOLLOWS *****
480 DATA " HERE IS THE TEXT THAT IS"
485 DATA "TO BE PRINTED. I HAVE PLACED"
490 DATA "IT IN QUOTES TO ALLOW THE"
500 DATA USE OF COMMAS IN THE CONTENTS. THE DATA WILL BE ACCEPTED CORREC
TLY (AS THIS
510 DATA LINE IS IF I HAVEN'T USED ANY COMMAS. THE TEXT IS TERMINATED
520 DATA "WITH A DATA END CARD, THIS IS THE LAST CARD IN THE PROGRAM."
530 DATA END

```

```

>
MANY COPIES OF THE ITEM
TO BE PRINTED?
DO YOU WANT TO ALIGN TO TOP
PAGE OR BETWEEN PRINTS
OR N)?
MANY SPACES BETWEEN
PRINTS
ALIGN PAPER AND PRESS
KEYS TO

```

```

HERE IS THE TEXT THAT IS
PLACED
IN THE
DATA WILL BE
ACCEPTED CORRECTLY
AS THIS
TEXT IS
USED
WITH A DATA END CARD, THIS
IS THE LAST CARD IN THE
PROGRAM.

```

MAJOR SYMBOL TABLE - MULTIPLE PRINTS

I	NAME	DESCRIPTION	I
I	C	.. NUMBER OF COPIES TO PRINT	I
I	LO	.. LINES PER PAGE	I
I	S	.. SPACES BEFORE PRINTING	I
I	T\$	.. TEXT	I
I	L	.. LINE COUNT	I

PAPER ROUTE – BASIC VERSION

Description

Paper route delivery schedule records and collection lists can be a tedious and time-consuming task for the young entrepreneur. This program can provide much needed assistance in these tasks.

Functions of the Program

The program accepts customer and price information from DATA statements and produces either a collection list or a route delivery list. Following the completion of the delivery list, customer and paper counts are produced to assist in ordering for the week.

Instructions for Use

The price of the various delivery options must be supplied along with a customer list, complete with their delivery requirements, prior to running the program.

Data Entry

All data is entered by means of DATA statements.

Data Formats

The following data formats are required:

1. The first data record provides the price of delivery information for collection list use:
Sun cost, Mon cost, . . . , Sat cost, Weekly cost, Monthly cost
2. Customer delivery items are entered using the following form:
Name, House number, Street name, Delivery schedule

The delivery schedule is coded as follows:

1. M is entered for monthly deliveries.
2. W is entered for full weekly deliveries.
3. D is entered to indicate that the customer receives papers only on selected days. It is followed (separated by a comma) by the days that the customer receives delivery (1-Sun, 2-Mon, . . . 7-Sat). See example data provided.

Output Description

See example provided. Two forms of output can be selected:

1. A list for collection purposes.
2. A daily delivery list for the route.

```

10 CALL CLEAR
20 REM PAPER ROUTE PROGRAM - BASIC
30 REM ***** DATA INITIALIZATION *****
40 M=10000
50 DIM P(7)
60 DIM D$(7)
70 DIM CO(7)
80 PRINT
90 PRINT
100 PRINT " TWO OPTIONS ARE AVAILABLE"
110 PRINT TAB(10);"1. PRINT OF COLLECTION LIST"
120 PRINT TAB(10);"2. PRINT OF ROUTE LIST "
130 PRINT
140 PRINT "ENTER OPTION NUMBER DESIRED"
150 INPUT O
160 REM ***** ENTRY OF NUMBER TO PRINT *****
170 READ CO(1),CO(2),CO(3),CO(4),CO(5),CO(6),CO(7),C1,C2
180 IF O<>1 THEN 220
190 IF C2<>0 THEN 220
200 PEINT"ENTER THE NUMBER OF WEEKS":"FOR MONTHLY CHARGES"
210 INPUT NO
220 REM ***** PROCESSING STARTS *****
230 PRINT "POSITION PAPER NOW"
240 INPUT G$
250 FOR I=1 TO M
260 READ N$
270 IF N$="END" THEN 800
280 READ A1$,A2$,T$
290 IF T$="D" THEN 340
300 FOR J=1 TO 7
310 D$(J)=" "
320 NEXT J
330 GOTO 430
340 K=1
350 FOR J=1 TO 7
360 D$(J)="*"
370 NEXT J
380 READ DO
390 IF DO=0 THEN 430
400 D$(DO)=" "
410 K=K+1
420 IF K<=7 THEN 380
430 IF O=1 THEN 560
440 REM ***** OPTION 2 *****
450 IF I<>1 THEN 490
460 PRINT "NAME";TAB(28);"ADDRESS";TAB(56);" S M T W T F S"
470 PRINT "-----"
480 REM
490 FOR J=1 TO 7
500 IF D$(J)="*" THEN 520
510 P(J)=P(J)+1
520 NEXT J
530 PRINJ "(";D$(1);") "(";D$(2);") "(";D$(3);") "(";D$(4);") "(";D$(5);
540 PRINT "(";D$(6);") "(";D$(7);")";TAB(28);N$;TAB(56);A1$;" ";A2$;:
550 GOTO 780
560 REM ***** OPTION 1 *****
570 IF I<>1 THEN 600
580 PRINT "NAME";TAB(28);"ADDRESS";TAB(46);"OWED"
590 PRINT "-----"
600 REM ***** COMPUTE BILL *****
610 IF T$<>"M" THEN 670
620 IF C2=0 THEN 650
630 T1=C2
640 GOTO 750
650 T1=C1*NO
660 GOTO 750
670 IF T$<>"W" THEN 700
680 T1=C1
690 GOTO 750
700 J=1

```

```

710 IF D$(J)="*" THEN 730
720 T1=T1+CO(J)
730 J=J+1
740 IF J<=7 THEN 710
750 T2=T2+T1
760 PRINT N$;TAB(2B);A1$;" ";A2$;TAB(46);T1;:
770 T1=0
780 NEXT I
790 REM *****
800 REM ***** TERMINATION POINT *****
810 IF O<>1 THEN B60
820 PRINT TAB(18);"-----"
830 PRINT TAB(2);"TOTAL OWED ";TAB(18);T2
840 PRINT
850 GOTO 990
860 PRINT
870 PRINT "*****"
880 PRINT "CUSTOMER COUNT =" ;I-1
890 PRINT
900 PRINT "DAILY COUNT"
910 PRINT "SUNDAY      ";P(1)
920 PRINT "MONDAY      ";P(2)
930 PRINT "TUESDAY     ";P(3)
940 PRINT "WEDNESDAY   ";P(4)
950 PRINT "THURSDAY    ";P(5)
960 PRINT "FRIDAY     ";P(6)
970 PRINT "SATURDAY    ";P(7)
980 PRINT "*****"
990 PRINT
1000 STOP
1010 REM *****
1020 REM          DATA ENTRIES FOLLOW
1030 REM *****
1040 REM FIRST ENTRY IS COST PER DAY (1-7), COST PER WEEK, PER MONTH
1050 REM IF MONTH=0 THEN MONTH CHARGE WILL BE BASED ON # WEEKS
1060 DATA .50,.10,.10,.10,.10,.10,.10,1.25,4.75
1070 DATA JOHN R. DOE
1080 DATA 555,SMOKEY DRIVE
1090 DATA W
1100 DATA JOSEPH R. WESTONBY
1110 DATA 456,EASERLY ROAD
1120 DATA M
1130 DATA JANE J. SMITH
1140 DATA 1700,SMOKEY DRIVE,M
1150 DATA RICHARD F. JONES
1160 DATA 1213,EASERLY ROAD,D,1,3,0
1170 DATA WILLIAM WILLIAMS
1180 DATA 1234,EASERLY ROAD,D,1,2,3,4,5,6,0
1190 DATA END

```

>RUN

```

TWO OPTIONS ARE AVAILABLE
1. PRINT OF COLLECTION LIST
2. PRINT OF ROUTE LIST
ENTER OPTION NUMBER DESIRED
?
POSITION PAPER NOW
?

```

```

NAME      ADDRESS      DWED
-----
JOHN R.   555 SMOKEY DRIVE 1.25
DOE
JOSEPH R. 456 EASERLY ROAD 4.75
WESTONBY
JANE J.   1700 SMOKEY DRIVE 4.75
SMITH
RICHARD F. 1213 EASERLY ROAD .6
JONES

```

WILLIAM WILLIAMS
1234 EASERLY ROAD 1

TOTAL OWED -----
 12.35

>RUN

TWO OPTIONS ARE AVAILABLE
1. PRINT OF COLLECTION LIST
2. PRINT OF ROUTE LIST
ENTER OPTION NUMBER DESIRED
POSITION PAPER NOW

```

NAME
ADDRESS            T    W    T    F    S
-----
GEOFF    R    D    D    D    D    D
SMOKEY    S    M    O    K    E    Y
DRIVE
JANE     J    M    S    M    I    T    H
1700     S    M    O    K    E    Y
DRIVE
RICHARD   R    D    E    R    L    Y
1213     E    A    S    E    R    L    Y
ROAD
WILLIAM   W    I    L    L    I    A    M    S
1234     E    A    S    E    R    L    Y
ROAD

```

```

*****
CUSTOMER COUNT = 5
*****
DAILY COUNT
MONDAY    3
TUESDAY   3
WEDNESDAY 3
THURSDAY  3
FRIDAY    3
SATURDAY  3
SUNDAY    3
*****

```

MAJOR SYMBOL TABLE - PAPER ROUTE - BASIC VERSION

```

I-----I
I NAME    .. DESCRIPTION            I
I-----I
I M       .. MAXIMUM NUMBER OF DATA READS    I
I P( )    .. DAILY PAPER COUNT                I
I D$( )   .. DAILY DELIVERY INDICATOR         I
I CO( )   .. PRICE OF DAILY PAPER             I
I O       .. OPTION NUMBER                    I
I C1      .. PRICE OF WEEKLY DELIVERY         I
I C2      .. PRICE FOR MONTHLY DELIVERY       I
I N$      .. CUSTOMER NAME                    I
I A1$     .. CUSTOMER HOUSE NUMBER            I
I A2$     .. CUSTOMER STREET ADDRESS          I
I T$      .. FREQUENCY OF DELIVERY            I
I T1      .. AMOUNT OWED BY INDIVIDUAL        I
I T2      .. TOTAL OWED                        I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME    .. DESCRIPTION            I
I-----I
I TAB     .. FORMATS PRINT LINES     I
I DIM     .. SINGLE DIMENSION ARRAYS   I
I-----I

```

PAPER ROUTE – EXTENDED VERSION

Description

This program extends the basic version by allowing the carry over of noncollected items from the previous collection period and assists the user by projecting his expenses for the period.

Functions of the Program

The functions of this program are identical to the basic version except that computations have been added to carry over money owed from the previous period. An additional function has been added to accept additional charges/credit items and compute a projected bill for the papers and services received.

Instructions for Use

See the basic version. Additional information must be supplied for the amounts owed from previous periods.

Data Entry

Data is entered using DATA statements. Additional charges and credits are entered at the keyboard.

Data Formats

Data formats are identical to the basic version except that the customer record is of the form:

Name, House number, Street name, Delivery schedule,
Amount owed from the previous period

Output Description

See example provided. The third option prints paper counts and the costs of delivery.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM PAPER ROUTE PROGRAM - EXTENDED
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1: "RS232.BA=9600.DA=B"
60 REM ***** DATA INITIALIZATION *****
70 M=10000
80 DIM P(7)
90 DIM T(8)
100 DIM B0(7)
110 DIM D$(7)
120 DIM C0(7)
130 PRINT
140 PRINT
150 PRINT " THREE OPTIONS ARE AVAILABLE"
160 PRINT TAB(10); "1. PRINT OF COLLECTION LIST"
```

```

170 PRINT TAB(10);"2. PRINT OF ROUTE LIST "
180 PRINT TAB(10);"3. BILL COMPUTATION"
190 PRINT
200 PRINT "ENTER OPTION NUMBER DESIRED"
210 INPUT O
220 REM ***** ENTRY OF NUMBER TO PRINT *****
230 READ CO(1),CO(2),CO(3),CO(4),CO(5),CO(6),CO(7),C1,C2
240 READ BO(1),BO(2),BO(3),BO(4),BO(5),BO(6),BO(7)
250 IF O<>1 THEN 290
260 IF C2<>0 THEN 290
270 PRINT "ENTER THE NUMBER OF WEEKS":"FOR MONTHLY CHARGES"
280 INPUT NO
290 REM ***** PROCESSINGS STARTS *****
300 PRINT "POSITION PAPER NOW"
310 INPUT G$
320 FOR I=1 TO M
330 READ N$
340 IF N$="END" THEN 960
350 READ A1$,A2$,T$
360 IF T$="D" THEN 410
370 FOR J=1 TO 7
380 D$(J)=" "
390 NEXT J
400 GOTO 500
410 K=1
420 FOR J=1 TO 7
430 D$(J)="*"
440 NEXT J
450 READ DO
460 IF DO=0 THEN 500
470 D$(DO)=" "
480 K=K+1
490 IF K<=7 THEN 450
500 READ B
510 IF O=3 THEN 890
520 IF O=1 THEN 650
530 REM ***** OPTION 2 *****
540 IF I<>1 THEN 580
550 PRINT #1:" S M T W T F S";TAB(25);"ADDRESS";TAB(50);"NAME"
560 PRINT #1:"-----";TAB(25);"-----";
570 PRINT #1:TAB(50);"-----"
580 FOR J=1 TO 7
590 IF D$(J)="*" THEN 610
600 P(J)=P(J)+1
610 NEXT J
620 PRINT #1: "(";D$(1);") (";D$(2);") (";D$(3);") (";D$(4);") (";D$(5);
630 PRINT #1: "(";D$(6);") (";D$(7);")";TAB(25);A1$;" ";A2$;TAB(50);N$
640 GOTO 940
650 REM ***** OPTION 1 *****
660 IF I<>1 THEN 690
670 PRINT #1:"ADDRESS";TAB(30);"OWED";TAB(42);"NAME"
680 PRINT #1:"-----";TAB(30);"-----";TAB(42);"-----"
690 REM ***** COMPUTE BILL *****
700 IF T$<>"M" THEN 760
710 IF C2=0 THEN 740
720 T1=C2+B
730 GOTO 850
740 T1=C1*NO+B
750 GOTO 850
760 IF T$<>"W" THEN 790
770 T1=C1+B
780 GOTO 850
790 J=1
800 T1=B
810 IF D$(J)="*" THEN 830
820 T1=T1+CO(J)
830 J=J+1
840 IF J<=7 THEN 810
850 T2=T2+T1
860 PRINT #1:A1$;" ";A2$;TAB(30);T1;TAB(42);N$

```



```

870 T1=0
880 GOTO 940
890 REM ***** OPTION 3 PREP *****
900 FOR J=1 TO 7
910 IF D$(J)="*" THEN 930
920 P(J)=P(J)+1
930 NEXT J
940 NEXT I
950 REM *****
960 REM ***** TERMINATION POINT *****
970 IF Q<>1 THEN 1020
980 PRINT #1;TAB(30);"-----"
990 PRINT #1;TAB(16);"TOTAL OWED ";TAB(30);T2
1000 PRINT #1
1010 GOTO 1460
1020 PRINT #1
1030 PRINT #1;"*****"
1040 PRINT #1;"CUSTOMER COUNT =";I-1
1050 PRINT #1
1060 PRINT #1;"DAILY COUNT"
1070 PRINT #1;"1 SUNDAY ";P(1)
1080 PRINT #1;"2 MONDAY ";P(2)
1090 PRINT #1;"3 TUESDAY ";P(3)
1100 PRINT #1;"4 WEDNESDAY ";P(4)
1110 PRINT #1;"5 THURSDAY ";P(5)
1120 PRINT #1;"6 FRIDAY ";P(6)
1130 PRINT #1;"7 SATURDAY ";P(7)
1140 PRINT #1;"*****"
1150 IF Q<>3 THEN 1460
1160 PRINT "ARE THERE ANY CHANGES TO":"THESE COUNTS (Y OR N)"
1170 INPUT A$
1180 IF A$="N" THEN 1250
1190 FOR I=1 TO 7
1200 PRINT "ENTER CHANGES FROM THE":"NUMBER SHOWN FOR DAY";I;" ";
1210 C=0
1220 INPUT C
1230 P(I)=P(I)+C
1240 NEXT I
1250 PRINT "ENTER ANY ADDITIONAL":"CHARGES OR CREDITS TO YOUR":"BILL";
1260 FOR I=1 TO 10
1270 B1=0
1280 INPUT B1
1290 IF B1=0 THEN 1320
1300 B2=B2+B1
1310 NEXT I
1320 PRINT #1
1330 PRINT #1
1340 PRINT #1;"DAY COUNT";TAB(12);"BILL"
1350 PRINT #1;"--- ----";TAB(12);"-----"
1360 FOR I=1 TO 7
1370 T(I)=P(I)*B0(I)
1380 PRINT #1;I;TAB(5);P(I);TAB(12);T(I)
1390 T(B)=T(B)+T(I)
1400 NEXT I
1410 PRINT #1;TAB(12);"-----"
1420 PRINT #1;"PAPER COSTS";TAB(12);T(B)
1430 PRINT #1;"OTHER COSTS";TAB(12);B2
1440 PRINT #1;TAB(12);"-----"
1450 PRINT #1;"TATAL BILL";TAB(12);T(B)+B2
1460 PRINT #1
1470 STOP
1480 REM *****
1490 REM DATA ENTRIES FOLLOW
1500 REM *****
1510 REM FIRST ENTRY IS COST PER DAY (1-7),COST PER WEEK, PER MONTH
1520 REM IF MONTH=0 THEN MONTH CHARGE WILL BE BASED ON # WEEKS
1530 DATA .50,.10,.10,.10,.10,.10,.10,1.25,4.75
1540 DATA .35,.07,.07,.07,.07,.07,.07
1550 DATA JOHN R. DOE
1560 DATA 555,SMOKEY DRIVE,W

```

```

1570 DATA .11
1580 DATA JOSEPH R. WESTONBY
1590 DATA 456,EASERLY ROAD,M
1600 DATA .12
1610 DATA JANE H. SMITH
1620 DATA 1700,SMOKEY DRIVE,M
1630 DATA .13
1640 DATA RICHARD F. JONES
1650 DATA 1213,EASERLY ROAD,D,1,3,0
1660 DATA .14
1670 DATA WILLIAM WILLIAMS
1680 DATA 1234,EASERLY ROAD,D,1,2,3,4,5,6,0
1690 DATA .15
1700 DATA END,0,0

```

```

>RUN
THREE OPTIONS ARE AVAILABLE
  1. PRINT OF COLLECTION LIST
  2. PRINT OF ROUTE LIST
  3. BILL COMPUTATION

```

ENTER OPTION NUMBER DESIRED

? 1

POSITION PAPER NOW

?

ADDRESS	OWED	NAME
555 SMOKEY DRIVE	1.36	JOHN R. DOE
456 EASERLY ROAD	4.87	JOSEPH R. WESTONBY
1700 SMOKEY DRIVE	4.88	JANE H. SMITH
1213 EASERLY ROAD	.74	RICHARD F. JONES
1234 EASERLY ROAD	1.15	WILLIAM WILLIAMS
TOTAL OWED		13

```

>RUN
THREE OPTIONS ARE AVAILABLE
  1. PRINT OF COLLECTION LIST
  2. PRINT OF ROUTE LIST
  3. BILL COMPUTATION

```

ENTER OPTION NUMBER DESIRED

? 2

POSITION PAPER NOW

?

S	M	T	W	T	F	S	ADDRESS	NAME
()	()	()	()	()	()	()	555 SMOKEY DRIVE	JOHN R. DOE
()	()	()	()	()	()	()	456 EASERLY ROAD	JOSEPH R. WESTONBY
()	()	()	()	()	()	()	1700 SMOKEY DRIVE	JANE H. SMITH
()	(*)	()	(*)	(*)	(*)	(*)	1213 EASERLY ROAD	RICHARD F. JONES
()	()	()	()	()	(*)	(*)	1234 EASERLY ROAD	WILLIAM WILLIAMS

```

*****
CUSTOMER COUNT = 5

```

DAILY COUNT

```

1 SUNDAY      5
2 MONDAY      4
3 TUESDAY     5
4 WEDNESDAY   4
5 THURSDAY    4
6 FRIDAY      4
7 SATURDAY    3

```

```

*****

```

```

>RUN
  THREE OPTIONS ARE AVAILABLE
    1. PRINT OF COLLECTION LIST
    2. PRINT OF ROUTE LIST
    3. BILL COMPUTATION

```

```

ENTER OPTION NUMBER DESIRED
? 3
POSITION PAPER NOW
?

```

```

*****
CUSTOMER COUNT = 5

```

```

DAILY COUNT
1 SUNDAY      5
2 MONDAY      4
3 TUESDAY     5
4 WEDNESDAY   4
5 THURSDAY    4
6 FRIDAY      4
7 SATURDAY    3

```

```

*****
ARE THERE ANY CHANGES TO
THESE COUNTS (Y OR N)
? Y

```

```

ENTER CHANGES FROM THE
NUMBER SHOWN FOR DAY 1   ? 6
ENTER CHANGES FROM THE
NUMBER SHOWN FOR DAY 2   ? 6
ENTER CHANGES FROM THE
NUMBER SHOWN FOR DAY 3   ? 6
ENTER CHANGES FROM THE
NUMBER SHOWN FOR DAY 4   ? 6
ENTER CHANGES FROM THE
NUMBER SHOWN FOR DAY 5   ? 6
ENTER CHANGES FROM THE
NUMBER SHOWN FOR DAY 6   ? 6
ENTER CHANGES FROM THE
NUMBER SHOWN FOR DAY 7   ? 6
ENTER ANY ADDITIONAL
CHARGES OR CREDITS TO YOUR
BILL
? 9.99
? 0

```

DAY	COUNT	BILL
1	11	3.85
2	10	.7
3	11	.77
4	10	.7
5	10	.7
6	10	.7
7	9	.63

```

-----
PAPER COSTS 8.05
OTHER COSTS 9.99
-----

```

```

TOTAL BILL 18.04

```

MAJOR SYMBOL TABLE - PAPER ROUTE -EXTENDED

I	NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	P()	.. DAILY PAPER COUNT	I
I	D\$()	.. DAILY DELIVERY INDICATORS	I
I	CO()	.. PRICE OF DAYS DELIVERY	I
I	T()	.. TOTAL PRICE OF DAYS PAPER	I
I	BO()	.. COST OF DAILY PAPER	I
I	O	.. OPTION NUMBER	I
I	C1	.. PRICE OF WEEKLY DELIVERY	I
I	C2	.. PRICE FOR MONTHLY DELIVERY	I
I	N\$	.. CUSTOMER NAME	I
I	A1\$	.. CUSTOMER HOUSE NUMBER	I
I	A2\$	.. CUSTOMER STREET	I
I	T\$	.. FREQUENCY OF DELIVERY	I
I	T1	.. INDIVIDUAL BILL	I
I	T2	.. TOTAL TO COLLECT	I
I	B	.. OWED FROM PAST PERIODS	I
I	B1	.. CHARGES CREDITS TO YOUR BILL	I
I	B2	.. TOTAL CHARGES/CREDITS TO YOUR BILL	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMAT PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

WEIGHT CONTROL

Description

Keeping records of weight for reviewing progress and analyzing diets is practiced consistently by weight clinics and health clubs. This program provides the capability to accomplish this effectively in your own home with your microcomputer.

Functions of the Program

The program determines the starting date for analysis and computes results achieved from that day forward. All data items read prior to the starting date are ignored by the program. The printed results provide daily weight information and a summarization of total results after completion of all processing.

Instructions for Use

Weight information should be recorded daily and entered as data prior to running the program.

Data Entry

All data is entered as DATA statements.

Data Format

The data format of the records is:

Month, Day, Weight

Output Description

See example provided.

```
10 CALL CLEAR
20 REM      WEIGHT CONTROL PROGRAM
30 REM      ***** DATA INITIALIZATION *****
40 M=1000
50 REM      *****
60 REM      ***** PROCESSING AREA *****
70 PRINT "SHALL WE START AT THE":"BEGINNING ( Y OR N)?"
80 INPUT A$
90 IF A$="Y" THEN 240
100 REM      ***** FIND STARTING POINT *****
110 PRINT "ENTER THE STARTING MONTH, ":"DAY FOR THE REPORT I.E., ":"JUN,30"
120 INPUT M1$,D1
130 FOR I=1 TO M
140 READ M$
150 IF M$="END" THEN 220
160 READ D,S
170 IF M$<>M1$ THEN 210
180 IF D<>D1 THEN 210
190 PRINT
200 GOTO 290
210 NEXT I
220 PRINT "THAT DATE WAS NOT FOUND"
230 GOTO 520
240 PRINT
```

```

250 PRINT
260 PRINT
270 READ M$,D,S
280 REM ***** PROCESSING ENTRIES TO PRINT *****
290 PRINT "INITIAL WEIGHT WAS ";S;"ON":D;M$
300 PRINT
310 PRINT " DATE";TAB(9);"WEIGHT";TAB(16);"+/- "
320 PRINT " -----";TAB(9);"-----";TAB(16);"-----"
330 T2=S
340 D2=D
350 FOR I=1 TO M
360 N=1
370 READ M$
380 IF M$="END" THEN 510
390 READ D,W
400 IF D<D2 THEN 420
410 N=D-D2
420 D2=D
430 T0=W-T2
440 PRINT D;M$;TAB(9);W;TAB(15);T0;
450 IF N=1 THEN 470
460 PRINT "**(";N;"DA)";
470 T2=W
480 N1=N1+N
490 PRINT
500 NEXT I
510 REM *****
520 REM ***** PROGRAM TERMINATION POINT *****
530 T4=W-S
540 PRINT TAB(15);"-----"
550 PRINT " TOTAL";TAB(15);T4
560 PRINT
570 PRINT "*****"
580 PRINT "FOR ";N1;" DAYS"
590 PRINT "AVERAGE DAILY RESULT WAS:      ";T4/N1
600 PRINT "*****"
610 PRINT
620 PRINT
630 STOP
640 REM *****
650 REM ***** DATA ENTRY FOLLOWS *****
660 DATA JUNE,28,234
670 DATA JUNE,29,237
680 DATA JUNE,30,235
690 DATA JUL,1,231
700 DATA JUL,2,230
710 DATA JUL,3,230
720 DATA JUL,5,228
730 DATA JUL,6,226
740 DATA JUL,8,220
750 DATA JUL,31,199
760 DATA END

```

```

>RUN
WHICH WE START AT THE
BEGINNING ( Y OR N ) ?
Y

```

```

INITIAL WEIGHT WAS 234 ON
28 JUNE

```

```

DATE      WEIGHT  +/-
-----
JUN 28  234    -
JUN 29  237    -
JUN 30  235    -
JUL  1  231    -
JUL  2  230    -
JUL  3  230    -
JUL  5  228    -
JUL  6  226    -
JUL  8  220    -
JUL 31  199    -
TOTAL   35

```


HOUSEHOLD INVENTORY

Description

For a wide variety of uses, including insurance requirements, it is advantageous to have a detailed record of all household property that includes purchase dates and costs. This program provides this information in a convenient form that can offer many supplemental benefits to the home.

Functions of the Program

The program accepts data from DATA statements and prints them in the order requested. The code for each printing option is kept separate to allow clarity and ease of extension.

Instructions for Use

Record information concerning your household items, and enter them as data prior to running the program.

Data Entry

All data is entered using DATA statements.

Data Format

The format of the entries is:

Item name, Location, Purchase date, Cost, Mfr, Serial Number

Output Description

See example provided. Output is presented in two forms as illustrated by the examples. All items can be printed in their original order or sorted by location.

```
10 CALL CLEAR
20 REM      HOUSEHOLD INVENTORY PROGRAM
30 REM      ***** DATA INITIALIZATION *****
40 M=1000
50 MO=40
60 PRINT "SHALL I PRINT THE ENTRIES": "IN ORDER BY LOCATION?"
70 INPUT A$
80 PRINT
90 PRINT
100 PRINT
110 IF A$="Y" THEN 290
120 PRINT "ITEM";TAB(16);"PURCHASED";TAB(28);"LOCATION";TAB(44);"COST";TAB(56);
130 PRINT "MFR";TAB(72);"SER. NBR"
140 PRINT "-----"
150 REM
160 REM      *****
170 REM      ***** PRINTING IN THEIR PRESENT ORDER *****
180 FOR I=1 TO M
190 READ I$
200 IF I$="END" THEN 250
210 READ L$,D$,C,M$,S$
220 PRINT I$;TAB(16);D$;TAB(28);L$;TAB(44);C;TAB(56);M$;TAB(72);S$;
```



```

230 NEXT I
240 REM *****
250 REM ***** PROGRAM TERMINATION POINT *****
260 PRINT
270 PRINT
280 STOP
290 REM *****
300 REM ***** PROCESSING ORDERING AND PRINT BY LOCATION *****
310 PRINT "LOCATION";TAB(16);"PURCHASED";TAB(28);"ITEM";TAB(44);
320 PRINT "COST";TAB(56);"MFR";TAB(72);"SER. NBR"
330 PRINT "-----"
340 REM
350 I=1
360 FOR J=1 TO M
370 READ I$
380 IF I$="END" THEN 540
390 READ L$,D$,C,M$,S$
400 IF J>I THEN 510
410 IF J<I THEN 530
420 X$=L$
430 IF I=1 THEN 510
440 RESTORE
450 FOR K=1 TO J
460 READ I$,L$,D$,C,M$,S$
470 IF X$<>L$ THEN 490
480 I1=I1+1
490 NEXT K
500 IF I1>1 THEN 540
510 IF L$<>X$ THEN 530
520 PRINT L$;TAB(16);D$;TAB(28);I$;TAB(44);C;TAB(56);M$;TAB(72);S$;
530 NEXT J
540 RESTORE
550 I1=0
560 IF I<>1 THEN 580
570 M=J-1
580 PRINT
590 I=I+1
600 IF I<=M THEN 360
610 GOTO 250
620 REM *****
630 REM ***** DATA ENTRIES FOLLOW *****
640 DATA TELEVISION,LIVING RM,DEC 1979,333.45,BRAND X,M123456
650 DATA RADIO,BEDROOM 1,JUN 1978,11.23,BRAND Y,345-1213
660 DATA DISHWASHER,KITCHEN,JAN 1978,189.45,BRAND Z,12-12-M12
670 DATA WATER SOFTENER,HOUSE 2,JUL 1945,432.56,BRAND Q,129876
680 DATA RANGE,KITCHEN,DEC 1945,234.20,BRAND X,26543
690 DATA END

```

<RUN

SHALL I PRINT THE ENTRIES
IN ORDER BY LOCATION?
Y

LOCATION ITEM MFR	PURCHASED COST SER. NBR
LIVING RM	DEC 1979
TELEVISION	333.45
BRAND X	M123456
BEDROOM 1	JUN 1978
RADIO	11.23
BRAND Y	345-1213
KITCHEN	JAN 1978
DISHWASHER	189.45
BRAND Z	12-12-M12

```

KITCHEN          DEC 1945
RANGE            234.2
BRAND X         26543

HOUSE 2          JUL 1945
WATER SOFTENER  432.56
BRAND Q         129876

```

<RUN

SHALL I PRINT THE ENTRIES
IN ORDER BY LOCATION?

```

N
ITEM            PURCHASED
LOCATION          COST
MFR             SER. NBR
-----
TELEVISION      DEC 1979
LIVING RM       333.45
BRAND X         M123456

RADIO           JUN 1978
BEDROOM 1       11.23
BRAND Y         345-1213

DISHWASHER      JAN 1978
KITCHEN         189.45
BRAND Z         12-12-M12

WATER SOFTENER JUL 1945
HOUSE 2         432.56
BRAND Q         129876

RANGE           DEC 1945
KITCHEN        234.2
BRAND X        26543

```

MAJOR SYMBOL TABLE - HOUSEHOLD INVENTORY

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I M     .. MAXIMUM NUMBER OF DATA READS           I
I I$    .. ITEM                                     I
I L$    .. ROOM/LOCATION                             I
I D$    .. PURCHASE DATE                           I
I C     .. COST                                     I
I M$    .. MANUFACTURER                             I
I S$    .. SERIAL NUMBER                             I
I I     .. COUNTER                                   I
I X$    .. ITEM BEING PRINTED                       I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I TAB   .. FORMATS PRINT LINES                       I
I-----I

```

7

Tutorial Programs for Home Use

Math Practice—Addition

Math Practice—Subtraction

Math Practice—Multiplication

Math Practice—Division

Temperature Conversion Tutor

MATH PRACTICE – ADDITION

Description

This program provides the ideal device for introducing your children to the computer and building up their arithmetic abilities in addition. The level of difficulty of the problems is redefined during each run to meet changing skill levels.

Functions of the Program

This program produces a series of addition problems with randomly generated values. The complexity of the problems is determined by your choice of the number of digits in them. The individual running the program is given the problems and computes answers independently of the machine. The answers are then asked for by the computer and are compared to the correct answers. The results of the comparisons are printed immediately. At the end of the exercise, the number correct, the number wrong, and the percent score are printed. The program prints five problems per line. The results are printed after each group of five problems, and a summary is produced at the end.

Instructions for Use

Run the program and respond to the questions.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided.

```
10 CALL CLEAR
20 REM  MATH PRACTICE ADDITION
30 REM  ***** DATA INITIALIZATION *****
40 Y=1
50 S=1
60 M=50
70 CO=0
80 WO=0
90 DIM R$(5)
100 DIM A(5)
110 DIM N1(5)
120 DIM N2(5)
130 DIM C(5)
140 PRINT "ENTER THE NUMBER OF DIGITS";"FOR THE PRACTICE NUMBERS";"(MAX. OF 3)";
150 INPUT S
160 IF S>3 THEN 170 ELSE 190
170 PRINT "ONLY TO A MAXIMUM OF 3."; "TRY AGAIN.";
180 GOTO 140
190 PRINT "HOW MANY ITEMS SHALL I PRINT";"(5, 10, 15, 20 ETC.)";
200 INPUT M
210 PRINT
220 REM  ***** PROCESSING AREA *****
230 FOR I=1 TO M/5
240 FOR J=1 TO 5
```

```

250 RANDOMIZE
260 N1(J)=INT(RND*10^S)
270 N2(J)=INT(RND*10^S)
280 NEXT J
290 FOR J=1 TO 5
300 FOR K=1 TO S
310 IF N1(J)>=10^(S-K) THEN 340
320 IF (S-K)+N1(J)=0 THEN 340
330 NEXT K
340 PRINT N1(J);TAB((J*5)+3);
350 NEXT J
360 PRINT
370 FOR J=1 TO 5
380 FOR K=1 TO S
390 IF N1(J)>=10^(S-K) THEN 420
400 IF (S-K)+N2(J)=0 THEN 420
410 NEXT K
420 PRINT N2(J);TAB((J*5)+3);
430 NEXT J
440 PRINT "-----"
450 FOR J=1 TO 5
460 FOR K=1 TO S+3
470 NEXT K
480 PRINT TAB(J*4)
490 NEXT J
500 FOR J=1 TO 5
510 PRINT
520 NEXT J
530 PRINT "ENTER THE ANSWERS, (WITH A":COMMA BETWEEN)"
540 INPUT A(1),A(2),A(3),A(4),A(5)
550 REM ***** PRINTS GROUP RESULTS *****
560 PRINT
570 PRINT "RESULTS OF THIS GROUP:"
580 PRINT
590 PRINT "ITEM";TAB(7);"MINE";TAB(14);"YOURS";TAB(22);"RESULT"
600 PRINT "-----"
610 FOR J=1 TO 5
620 C(J)=N1(J)+N2(J)
630 IF C(J)<>A(J) THEN 670
640 R$(J)="CORRECT"
650 CO=CO+1
660 GOTO 690
670 R$(J)="*WRONG*"
680 WO=WO+1
690 PRINT J;". ";TAB(5);C(J);TAB(14);A(J);TAB(22);R$(J)
700 NEXT J
710 NEXT I
720 REM ***** PROGRAM TERMINATION POINT *****
730 PRINT
740 PRINT "*****"
750 PRINT TAB(9);"SCORE BOARD"
760 PRINT "*****"
770 PRINT "QUESTIONS";TAB(15);CO+WO
780 PRINT
790 PRINT "NUMBER CORRECT";TAB(20);CO
800 PRINT "NUMBER *WRONG*";TAB(20);WO
810 PRINT
820 PRINT "YOUR SCORE IS";(CO/(CO+WO))*100;"%"
830 PRINT
840 STOP

```

```

ENTER THE NUMBER OF DIGITS
FOR THE PRACTICE NUMBERS
<MAX. OF 3>?
HOW MANY ITEMS SHALL I PRINT
<5, 10, 15, 20 ETC.>?
  30      7      76      63      33
  5       0      50      27      26
-----

```

ENTER THE ANSWERS, (WITH A
 NUMBER BETWEEN 0, 9)

RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1	35	35	CORRECT
2	7	7	CORRECT
3	126	125	*WRONG*
4	59	59	CORRECT

***** SCORE BOARD *****

***** QUESTIONS 5 *****

NUMBER CORRECT 3
 NUMBER *WRONG* 2

YOUR SCORE IS 60 %

MAJOR SYMBOL TABLE - MATH PRACTICE - ADDITION

I	NAME	DESCRIPTION	I
I	Y	.. SEED FOR RANDOM NUMBER	I
I	S	.. NUMBER OF DIGITS IN PROBLEMS	I
I	M	.. NUMBER OF PROBLEMS	I
I	CO	.. NUMBER CORRECT	I
I	WO	.. NUMBER WRONG	I
I	R()	.. RESULTS CORRECT/WRONG	I
I	A()	.. ANSWERS INPUT	I
I	N1()	.. PROBLEM PART 1	I
I	N2()	.. PROBLEM PART 2	I
I	C()	.. CORRECT ANSWERS	I
I	J	.. QUESTION NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	RND	.. GENERATES RANDOM NUMBERS	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

MATH PRACTICE – SUBTRACTION

Description

This program provides an ideal device for introducing your children to the computer and building up their arithmetic abilities in subtraction. The level of difficulty of the problems is redefined during each run to meet changing skill levels.

Functions of the Program

This program produces a series of subtraction problems with randomly generated values. The complexity of the problems is determined by your choice of the number of digits in them. The individual running the program is given the problems and computes answers independently of the machine. The answers are then asked for by the computer and are compared to the correct answers. The results of the comparisons are printed immediately. At the end of the exercise, the number correct, the number wrong, and the percent score are printed. The program prints five problems per line. The results are printed after each group of five problems, and a summary is produced at the end.

Instructions for Use

Run the program and respond to the questions.

Data Entry

All data is entered through the keyboard.

Output Description

See examples provided.

```
10 CALL CLEAR
20 REM   MATH PRACTICE SUBTRACTION
30 REM   ***** DATA INITIALIZATION *****
70 CO=0
80 WO=0
90 DIM R$(5)
100 DIM A(5)
110 DIM N1(5)
120 DIM N2(5)
130 DIM C(5)
140 PRINT "ENTER THE NUMBER OF DIGITS"; "FOR THE PRACTICE NUMBERS"; "(MAX.
    OF 3)";
150 INPUT S
160 IF S>3 THEN 170 ELSE 190
170 PRINT "ONLY TO A MAXIMUM OF 3."; "TRY AGAIN.";
180 GOTO 140
190 PRINT "HOW MANY ITEMS SHALL I PRINT"; "(5, 10, 15, 20 ETC.)";
200 INPUT M
210 PRINT
220 REM   ***** PROCESSING AREA *****
230 FOR I=1 TO M/5
240 FOR J=1 TO 5
250 RANDOMIZE
```

```

260 N1(J)=INT(RND*10^S)
270 N2(J)=INT(RND*10^S)
275 IF N2(J)>N1(J)THEN 260
280 NEXT J
300 PRINT "ADD:";:
310 FOR J=1 TO 5
320 FOR K=1 TO 8
330 IF N1(J)>=10^(S-K)THEN 360
340 IF (S-K)+N1(J)=0 THEN 360
345 PRINT " ";
350 NEXT K
360 PRINT N1(J);TAB((J*5)+3);
370 NEXT J
380 PRINT
390 FOR J=1 TO 5
400 FOR K=1 TO 8
410 IF N2(J)>=10^(S-K)THEN 440
420 IF (S-K)+N2(J)=0 THEN 440
425 PRINT " ";
430 NEXT K
440 PRINT N2(J);TAB((J*5)+3);
450 NEXT J
460 PRINT "-----"
530 PRINT ":-:"
550 PRINT "ENTER THE ANSWERS, (WITH A"":"COMMA BETWEEN)"
560 INPUT A(1),A(2),A(3),A(4),A(5)
570 REM ***** PRINTS GROUP RESULTS *****
580 PRINT
590 PRINT "RESULTS OF THIS GROUP:"
600 PRINT
610 PRINT "ITEM";TAB(7);"MINE";TAB(14);"YOURS";TAB(22);"RESULT"
620 PRINT "-----"
630 FOR J=1 TO 5
640 C(J)=N1(J)+N2(J)
650 IF C(J)<>A(J)THEN 690
660 R$(J)="CORRECT"
670 CO=CO+1
680 GOTO 710
690 R$(J)="*WRONG*"
700 WO=WO+1
710 PRINT STR$(J);". ";TAB(6);C(J);TAB(14);A(J);TAB(22);R$(J)
720 NEXT J
730 PRINT
740 PRINT
750 NEXT I
760 REM ***** PROGRAM TERMINATION POINT *****
770 PRINT
780 PRINT "*****"
790 PRINT TAB(9);"SCORE BOARD"
800 PRINT "*****"
810 PRINT "QUESTIONS";TAB(15);CO+WO
820 PRINT
830 PRINT "NUMBER CORRECT";TAB(20);CO
840 PRINT "NUMBER *WRONG*";TAB(20);WO
850 PRINT
860 PRINT "YOUR SCORE IS ";STR$((CO/(CO+WO))*100);"%
870 PRINT
880 STOP

```

```

ENTER THE NUMBER OF DIGITS
FOR THE PRACTICE NUMBERS
(MAX. OF 3)?
HOW MANY ITEMS SHALL I PRINT
(5, 10, 15, 20 ETC.)? 5
  33      82      15      75      87
-----  71      88      68      2
-----

```


ENTER THE ANSWERS, (WITH A
 COMMAND) BETWEEN 0 AND 95
 RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1	24	24	CORRECT
2	11	11	CORRECT
3	11	11	CORRECT
4	11	11	CORRECT
5	85	85	CORRECT

 SCORE *****
 BOARD *****
 QUESTIONS *****

NUMBER CORRECT 4
 NUMBER WRONG 1

YOUR SCORE IS 80 %

MAJOR SYMBOL TABLE - MATH PRACTICE - SUBTRACTION

I	NAME	DESCRIPTION	I
I	Y	.. SEED FOR RANDOM NUMBER	I
I	S	.. NUMBER OF DIGITS IN PROBLEMS	I
I	M	.. NUMBER OF PROBLEMS	I
I	CO	.. NUMBER CORRECT	I
I	WO	.. NUMBER WRONG	I
I	R*()	.. RESULTS CORRECT/WRONG	I
I	A()	.. ANSWERS INPUT	I
I	N1()	.. PROBLEM PART 1	I
I	N2()	.. PROBLEM PART 2	I
I	C()	.. CORRECT ANSWERS	I
I	J	.. QUESTION NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	RND	.. GENERATES RANDOM NUMBERS	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

MATH PRACTICE – MULTIPLICATION

Description

This program provides the ideal device for introducing your children to the computer and building up their arithmetic abilities in multiplication. The level of difficulty of the problems is redefined during each run to meet changing skill levels.

Functions of the Program

This program produces a series of multiplication problems with randomly generated values. The complexity of the problems is determined by your choice of the number of digits in them. The individual running the program is given the problems and computes answers independently of the machine. The answers are then asked for by the computer and are compared to the correct answers. The results of the comparisons are printed immediately. At the end of the exercise, the number correct, the number wrong, and the percent score are printed. The program prints five problems per line. The results are printed after each group of five problems, and a summary is produced at the end.

Instructions for Use

Run the program and respond to the questions.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided.

```
10 CALL CLEAR
20 REM      MATH PRACTICE MULTIPLICATION
30 REM      ***** DATA INITIALIZATION *****
40 Y=1
50 S=1
60 M=50
70 CO=0
80 WO=0
90 DIM R$(5)
100 DIM A(5)
110 DIM N1(5)
120 DIM N2(5)
130 DIM C(5)
140 PRINT "ENTER THE NUMBER OF DIGITS";"FOR THE PRACTICE NUMBERS";"(MAX. OF 3)";
150 INPUT S
160 IF S>3 THEN 170 ELSE 190
170 PRINT "ONLY TO A MAXIMUM OF 3."; "TRY AGAIN.";
180 GOTO 140
190 PRINT "HOW MANY ITEMS SHALL I PRINT"; "(5, 10, 15, 20 ETC.)";
200 INPUT M
210 PRINT
220 REM      ***** PROCESSING AREA *****
230 FOR I=1 TO M/5
240 FOR J=1 TO 5
```

```

250 RANDOMIZE
260 N1(J)=INT(RND*10^S)
270 N2(J)=INT(RND*10^S)
280 NEXT J
290 FOR J=1 TO 5
300 FOR K=1 TO S
310 IF N1(J)>=10^(S-K) THEN 340
320 IF (S-K)+N1(J)=0 THEN 340
330 NEXT K
340 PRINT N1(J);TAB((J*5)+3);
350 NEXT J
360 PRINT
370 FOR J=1 TO 5
380 FOR K=1 TO S
390 IF N1(J)>=10^(S-K) THEN 420
400 IF (S-K)+N2(J)=0 THEN 420
410 NEXT K
420 PRINT N2(J);TAB((J*5)+3);
430 NEXT J
440 PRINT "-----"
450 FOR J=1 TO 5
460 FOR K=1 TO S+3
470 NEXT K
480 PRINT TAB(J*4)
490 NEXT J
500 FOR J=1 TO 5
510 PRINT
520 NEXT J
530 PRINT "ENTER THE ANSWERS, (WITH A";"COMMA BETWEEN)"
540 INPUT A(1),A(2),A(3),A(4),A(5)
550 REM ***** PRINTS GROUP RESULTS *****
560 PRINT
570 PRINT "RESULTS OF THIS GROUP:"
580 PRINT
590 PRINT "ITEM";TAB(7);"MINE";TAB(14);"YOURS";TAB(22);"RESULT"
600 PRINT "-----"
610 FOR J=1 TO 5
620 C(J)=N1(J)*N2(J)
630 IF C(J)<>A(J) THEN 670
640 R*(J)="CORRECT"
650 CO=CO+1
660 GOTO 690
670 R*(J)="*WRONG*"
680 WO=WO+1
690 PRINT J;" ";TAB(5);C(J);TAB(14);A(J);TAB(22);R*(J)
700 NEXT J
710 PRINT
720 PRINT
730 NEXT I
740 REM ***** PROGRAM TERMINATION POINT *****
750 PRINT
760 PRINT "*****"
770 PRINT TAB(9);"SCORE BOARD"
780 PRINT "*****"
790 PRINT "QUESTIONS";TAB(15);CO+WO
800 PRINT
810 PRINT "NUMBER CORRECT";TAB(20);CO
820 PRINT "NUMBER *WRONG*";TAB(20);WO
830 PRINT
840 PRINT "YOUR SCORE IS";(CO/(CO+WO))*100;"%"
850 PRINT
860 STOP

```

```

ENTER THE NUMBER OF DIGITS
IN THE FIRST NUMBER
(1-10, 15, 20, 25, 30, 35, 40, 45, 50)
-----
30      84      100     400     100
91      88      100     400     100
-----

```

ENTER THE ANSWERS, (WITH A
 ? 2730,3713,450,3785,1134

RESULTS OF THIS GROUP:

ITEM	MINE	YOURS	RESULT
1	2	2	CORRECT
2	3	3	CORRECT
3	1	1	CORRECT
4	3	3	CORRECT
5	4	4	CORRECT

 *****CORRECT*****
 *****QUESTIONS*****
 *****5*****
 NUMBER CORRECT 5
 NUMBER WRONG 0
 YOUR SCORE IS 60 %

MAJOR SYMBOL TABLE - MATH PRACTICE - MULTIPLICATION

I	NAME	DESCRIPTION	I
I	Y	SEED FOR RANDOM NUMBER	I
I	S	NUMBER OF DIGITS IN PROBLEMS	I
I	M	NUMBER OF PROBLEMS	I
I	CO	NUMBER CORRECT	I
I	WO	NUMBER WRONG	I
I	R\$()	RESULTS CORRECT/WRONG	I
I	A()	ANSWERS INPUT	I
I	N1()	PROBLEM PART 1	I
I	N2()	PROBLEM PART 2	I
I	C()	CORRECT ANSWERS	I
I	J	QUESTION NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	RND	GENERATES RANDOM NUMBERS	I
I	TAB	FORMATS PRINT LINES	I
I	INT	CONVERTS NUMBER TO INTEGER	I
I	DIM	SINGLE DIMENSION ARRAY	I

MATH PRACTICE – DIVISION

Description

This program provides the ideal device for building a child's arithmetic capability in division. The level of problem difficulty is easily modified to meet changing skill levels (without program modification).

Functions of the Program

This program produces a series of division problems with randomly selected values. The complexity of the problems is determined by the choice of the number of digits in the problems and the number of decimal digits for rounding accuracy in the answer. The individual running the program computes answers independently of the machine and enters the answers when they are requested. These answers are compared to the correct answers, and the results of the comparison are printed immediately. At the end of the exercise, the number correct, the number wrong, and the percent correct are printed. The randomly selected problems are printed five per line. The answers are requested, compared, and the results printed after each line of five problems is complete.

Instructions for Use

Run the program and respond to the questions asked by the program.

Output Description

See example provided.

Comments

Because of number storage differences between machines, the answer analysis routine (lines 570-740) should be verified.

```
10 CALL CLEAR
20 REM ***** MATH PRACTICE DIVISION *****
30 REM *NOTE* INDIVIDUAL MACHINE DIFFERENCES IN HANDLING
40 REM NUMERIC ITEMS MAY CAUSE INCORRECT ANSWER ANALYSIS
50 REM WHEN DEALING WITH LARGE ANSWERS WITH EXTENDED DECIMAL
60 REM POSITIONS
70 REM
80 REM ***** DATA INITIALIZATION *****
120 CO=0
130 WO=0
140 DIM R$(5)
150 DIM A(5)
160 DIM N1(5)
170 DIM N2(5)
180 DIM C(5)
190 PRINT "ENTER THE NUMBER OF DIGITS":"FOR THE PRACTICE DIVISORS": "(MAX.
    OF 3)";
200 INPUT S
205 IF S>3 THEN 190
210 PRINT "ENTER THE NUMBER OF DIGITS":"FOR THE DIVIDEND";
220 INPUT S2
```

```

230 PRINT "ENTER THE NUMBER OF DECIMAL": "POSITIONS FOR THE RESULT";
240 INPUT S3
280 PRINT "HOW MANY ITEMS SHALL I PRINT": "(5, 10, 15, 20 ETC.)";
290 INPUT M
300 PRINT
310 REM ***** PROCESSING AREA *****
320 FOR I=1 TO M/5
330 FOR J=1 TO 5
340 RANDOMIZE
350 N1(J)=INT(RND*10^S)
360 IF N1(J)=0 THEN 350
370 N2(J)=INT(RND*10^S2)
380 NEXT J
390 FOR J=1 TO 5
400 NEXT J
410 PRINT
420 FOR J=1 TO 5
425 L=LEN(STR$(N1(J)))
430 PRINT TAB(7+L); "_____": STR$(J); ".    "; STR$(N1(J)); "/" ; N2(J)
435 PRINT
440 NEXT J
450 PRINT :
490 PRINT "ENTER THE ANSWERS, (WITH A": "COMMA BETWEEN)"
500 INPUT A(1), A(2), A(3), A(4), A(5)
510 REM ***** PRINTS GROUP RESULTS *****
520 PRINT
530 PRINT "RESULTS OF THIS GROUP:"
540 PRINT
550 PRINT "ITEM"; TAB(7); "MINE"; TAB(14); "YOURS"; TAB(22); "RESULT"
560 PRINT "-----"
570 FOR J=1 TO 5
590 C(J)=N2(J)/N1(J)
600 C1=INT(C(J)*10^(S3+1))
610 C2=INT(C(J)*10^S3)
620 IF (C1-(C2*10))<5 THEN 640
630 C2=C2+1
640 C2=(C2/(10^S3))
650 IF C2-A(J)>(1/10^(S3+1)) THEN 700
660 IF C2-A(J)<(-1/10^(S3+1)) THEN 700
670 R$(J)="CORRECT"
680 CO=CO+1
690 GOTO 720
700 R$(J)="*WRONG*"
710 WO=WO+1
720 PRINT STR$(J); ". "; TAB(6); C2; TAB(14); A(J); TAB(22); R$(J)
730 C2=0
740 NEXT J
750 PRINT
760 PRINT
770 NEXT I
780 REM ***** TERMINATION POINT *****
790 PRINT
800 PRINT "*****"
810 PRINT "*****SCORE BOARD*****"
820 PRINT "*****"
830 PRINT "QUESTIONS"; TAB(20); CO+WO;
840 PRINT
850 PRINT "NUMBER CORRECT"; TAB(20); CO
860 PRINT "NUMBER *WRONG*"; TAB(20); WO
870 PRINT "YOUR SCORE IS"; TAB(21); STR$((CO/(CO+WO))*100); "%"
880 PRINT "*****"
890 PRINT
900 STOP
910 FOR RIK=1 TO 1000
920 NEXT RIK
930 RETURN

```


TEMPERATURE CONVERSION TUTOR

Description

This program produces a series of temperature conversion problems with randomly selected values. The type of conversion (Fahrenheit to Celsius, or the reverse) is determined by your response to the program question.

Functions of the Program

The individual running the program computes answers independently of the computer and provides the answers to the machine when requested. These answers are compared to the correct answers, and the results of the comparisons are printed immediately. The program randomly selects the values of the items and prints them five per line. At the end of the exercise, the number correct, the number wrong, and the percent correct are printed. After the completion of all problems, a summary of the results is printed.

Instructions for Use

Run the program and answer the questions asked.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided.

```
10 CALL CLEAR
20 REM   TEMPERATURE CONVERSION TUTORIAL PROGRAM
30 REM   ***** DATA INITIALIZATION *****
40 DIM Z(5)
50 DIM A(5)
60 DIM R$(5)
70 DIM C(5)
90 C0=0
100 W0=0
130 F2=-50
140 F1=300
150 C2=-25
160 C1=150
170 PRINT "WHICH EXERCISE WOULD YOU": "LIKE TO TRY?:"
180 PRINT "CELSIUS TO FAHRENHEIT (C) OR": "FAHRENHEIT TO CELSIUS (F):"
190 INPUT A$
200 PRINT "HOW MANY PRACTICE EXERCISES": "SHALL WE TRY 5,10,15,ETC:"
210 INPUT N
220 REM   ***** PROCESSING AREA *****
230 FOR I=1 TO N/5
240 IF A$="C" THEN 290
250 T1$="FAHRENHEIT"
260 N1=F1
270 N2=F2
280 GOTO 320
290 T1$="CELSIUS"
300 N1=C1
```


MAJOR SYMBOL TABLE - TEMPERATURE CONVERSIONS

I	NAME	DESCRIPTION	I
I	Z()	TEMPERATURES TO CONVERT	I
I	A()	ANSWERS INPUT	I
I	R\$	RESULTS CORRECT/WRONG	I
I	C()	CORRECT ANSWERS	I
I	CO	NUMBER CORRECT	I
I	WO	NUMBER WRONG	I
I	N	NUMBER OF PROBLEMS	I
I	Y	RANDOM NUMBER SEED	I
I	F2	MINIMUM F TEMP	I
I	F1	MAXIMUM F TEMP	I
I	C2	MINIMUM C TEMP	I
I	C1	MAXIMUM C TEMP	I
I	A\$	CONVERSION DIRECTION	I
I	N1	MAXIMUM RANDOM TEMPERATURE	I
I	N2	MINIMUM RANDOM NUMBER	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	INT	CONVERTS NUMBERS TO INTEGERS	I
I	RND	GENERATES A RANDOM NUMBER	I
I	TAB	FORMATS PRINT LINES	I
I	DIM	SINGLE DIMENSION ARRAYS	I

8

Conversion Programs

Metric Conversions
Temperature Conversions
Currency Conversions

METRIC CONVERSIONS

Description

This program produces conversions between standard measurements and metric units.

Functions of the Program

The program allows conversions of length, area, mass (weight), or liquid volume. The conversion can be either to or from the metric units.

Instructions for Use

Run the program and answer the questions asked.

Output Description

See example provided.

Comments

If additional conversion accuracy is required, modify the DATA statements in lines 1110-1320 to include the more accurate multiplier.

```
10 CALL CLEAR
20 REM METRIC CONVERSION PROGRAM
30 REM COMPUTATIONS ARE APPROXIMATE CONVERSIONS BASED UPON TABLES
40 REM PROVIDED IN THE SMALL BUSINESS ADMINISTRATION'S
50 REM MANAGEMENT AID NO 214 AND NBS PUBLICATION 304A.
60 REM *****
70 REM ***** DATA INITIALIZATION *****
80 M=8
90 M1=9
100 M2=6
110 M3=8
120 DIM L1$(8)
130 DIM L2$(8)
140 DIM L3(8)
150 DIM A1$(9)
160 DIM A2$(9)
170 DIM A3(9)
180 DIM W1$(6)
190 DIM W2$(6)
200 DIM W3(6)
210 DIM V1$(8)
220 DIM V2$(8)
230 DIM V3(8)
240 FOR I=1 TO M
250 READ L1$(I),L2$(I),L3(I)
260 NEXT I
270 FOR I=1 TO M1
280 READ A1$(I),A2$(I),A3(I)
290 NEXT I
300 FOR I=1 TO M2
310 READ W1$(I),W2$(I),W3(I)
320 NEXT I
330 FOR I=1 TO M3
340 READ V1$(I),V2$(I),V3(I)
350 NEXT I
360 REM *****
370 REM ***** PROCESSING AREA *****
380 PRINT "DO YOU WISH TO CONVERT": "LENGTH(L), AREA(A), "
```

```

390 PRINT "MASS(M), OR LIQUID VOLUME(V)"
400 INPUT AA$
410 PRINT
420 PRINT "   CONVERSIONS AVAILABLE"
430 PRINT
440 PRINT "NBR FROM";TAB(15);"   TO"
450 PRINT "-----"
460 IF AA$="L" THEN 520
470 IF AA$="A" THEN 650
480 IF AA$="M" THEN 780
490 IF AA$="V" THEN 910
500 PRINT "ENTRY MUST BE L, A, M, OR V."
510 GOTO 380
520 REM ***** PRINT FOR LENGTH *****
530 FOR I=1 TO M
540 PRINT I;TAB(5);L1$(I);TAB(18);L2$(I)
550 NEXT I
560 PRINT
570 PRINT "ENTER THE NUMBER OF THE":"CONVERSION TO BE USED":"(0 WHEN DONE)";
580 INPUT N
590 IF N=0 THEN 1040
600 PRINT "ENTER THE NUMBER OF ";L1$(N);
610 INPUT L0
620 L=L0*L3(N)
630 PRINT L0;L1$(N);"=";L;L2$(N)
640 GOTO 560
650 REM ***** PRINT OF AREA *****
660 FOR I=1 TO M1
670 PRINT I;TAB(5);A1$(I);TAB(18);A2$(I)
680 NEXT I
690 PRINT
700 PRINT "ENTER THE NUMBER OF THE":"CONVERSION TO BE USED":"(0 WHEN DONE)"
710 INPUT N
720 IF N=0 THEN 1050
730 PRINT "ENTER THE NUMBER OF ";A1$(N);
740 INPUT A0
750 A=A0*A3(N)
760 PRINT A0;A1$(N);"=";A;A2$(N)
770 GOTO 690
780 REM ***** PRINT OF MASS *****
790 FOR I=1 TO M2
800 PRINT I;TAB(5);W1$(I);TAB(18);W2$(I)
810 NEXT I
820 PRINT
830 PRINT "ENTER THE NUMBER OF THE":"CONVERSION TO BE USED":"(0 WHEN DONE)"
840 INPUT N
850 IF N=0 THEN 1050
860 PRINT "ENTER THE NUMBER OF ";W1$(N);
870 INPUT W0
880 W=W0*W3(N)
890 PRINT W0;W1$(N);"=";W;W2$(N)
900 GOTO 820
910 REM ***** PRINT OF LIQUID VOLUME *****
920 FOR I=1 TO M3
930 PRINT I;TAB(5);V1$(I);TAB(18);V2$(I)
940 NEXT I
950 PRINT
960 PRINT "ENTER THE NUMBER OF THE":"CONVERSION TO BE USED":"(0 WHEN DONE)";
970 INPUT N
980 IF N=0 THEN 1050
990 PRINT "ENTER THE NUMBER OF ";V1$(N);
1000 INPUT V0
1010 V=V0*V3(N)
1020 PRINT V0;V1$(N);"=";V;V2$(N)
1030 GOTO 950
1040 REM ***** PROGRAM TERMINATION POINT *****
1050 REM *****
1060 PRINT
1070 PRINT
1080 STOP

```

```

1090 REM *****
1100 REM ***** DATA FOR INITIALIZATION *****
1110 REM ***** LENGTH *****
1120 DATA INCHES,MILLIMETERS,25.4,FEET,METERS,.3048
1130 DATA YARDS,METERS,.9144,MILES,KILOMETERS,1.6093
1140 DATA MILLIMETERS,INCHES,.0394,METERS,FEET,3.2808
1150 DATA METERS,YARDS,1.0936,KILOMETERS,MILES,.6214
1160 REM ***** AREA *****
1170 DATA SQ INCHES,SQ CM,6.4516,SQ FEET,SQ METERS,.0929
1180 DATA SQ YARDS,SQ METERS,.8361,SQ MILES,SQ KM,2.59
1190 DATA ACRES,SQ HECTARES,.4047
1200 DATA SQ CM,SQ INCHES,.155,SQ METERS,SQ YARDS,1.196
1210 DATA SQ KM,SQ MILES,.3861
1220 DATA SQ HECTARES,ACRES,2.471
1230 REM ***** MASS *****
1240 DATA DUNCES,GRAMS,28.3495,POUNDS,KILOGRAMS,.4536
1250 DATA SHORT TONS,MEGAGRAMS,.9,GRAMS,DUNCES,.0353
1260 DATA KILOGRAMS,POUNDS,2.2046,MEGAGRAMS,SHORT TONS,1.1
1270 REM ***** LIQUID VOLUME *****
1280 DATA DUNCES,MILLILITERS,30,PINTS,LITERS,.4732
1290 DATA QUARTS,LITERS,.9464,GALLONS,LITERS,3.7856
1300 DATA MILLILITERS,OUNCES,.03,LITERS,PINTS,2.1134
1310 DATA LITERS,QUARTS,1.0567,LITERS,GALLONS,.2642
1320 REM *****

```

```

DO YOU WISH TO CONVERT
FROM (N), OR LIQUID VOLUME (V)
Y
CONVERSIONS AVAILABLE

```

NBR	FROM	TO
1	INCHES	MILLIMETERS
2	FEET	METERS
3	YARDS	METERS
4	MILES	KILOMETERS
5	ACRES	HECTARES
6	SQ INCHES	SQ CM
7	SQ FEET	SQ METERS
8	SQ YARDS	SQ METERS
9	SQ MILES	SQ KM

```

ENTER THE NUMBER OF THE
CONVERSION TO BE USED
Y
ENTER THE NUMBER OF YARDS
10 YARDS = 9.144 METERS

```

```

DO YOU WISH TO CONVERT
FROM (N), OR LIQUID VOLUME (V)
Y
CONVERSIONS AVAILABLE

```

NBR	FROM	TO
1	INCHES	MILLIMETERS
2	FEET	METERS
3	YARDS	METERS
4	MILES	KILOMETERS
5	ACRES	HECTARES
6	SQ INCHES	SQ CM
7	SQ FEET	SQ METERS
8	SQ YARDS	SQ METERS
9	SQ MILES	SQ KM

```

ENTER THE NUMBER OF THE
CONVERSION TO BE USED
Y
ENTER THE NUMBER OF SQ MILES
10 SQ MILES = 25.9 SQ KM
ENTER THE NUMBER OF THE
CONVERSION TO BE USED
Y

```

MAJOR SYMBOL TABLE - METRIC CONVERSIONS

I	NAME	.. DESCRIPTION	I
I	M	.. MAXIMUM ARRAY SIZE - LENGTH	I
I	M1	.. MAXIMUM ARRAY SIZE - AREA	I
I	M2	.. MAXIMUM ARRAY SIZE - WEIGHT	I
I	M3	.. MAXIMUM ARRAY SIZE - VOLUME	I
I	L1\$()	.. STANDARD LENGTH UNIT	I
I	L2\$()	.. METRIC LENGTH UNIT	I
I	L3()	.. CONVERSION FACTOR	I
I	A1\$()	.. STANDARD AREA UNIT	I
I	A2\$()	.. METRIC AREA UNIT	I
I	A3()	.. CONVERSION FACTOR	I
I	W1\$()	.. STANDARD WEIGHT UNIT	I
I	W2\$()	.. METRIC WEIGHT UNIT	I
I	W3()	.. CONVERSION FACTOR	I
I	V1\$()	.. STANDARD VOLUME UNIT	I
I	V2\$()	.. METRIC VOLUME UNIT	I
I	V3()	.. CONVERSION FACTOR	I
I	N	.. CONVERSION OPTION NUMBER	I
I	LO	.. INPUT LENGTH	I
I	L	.. CONVERTED LENGTH	I
I	A0	.. INPUT AREA	I
I	A	.. CONVERTED AREA	I
I	W0	.. INPUT WEIGHT	I
I	W	.. CONVERTED WEIGHT	I
I	V0	.. INPUT VOLUME	I
I	V	.. CONVERTED VOLUME	I

FUNCTIONS USED

I	NAME	.. DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

TEMPERATURE CONVERSIONS

Description

This program provides an easy and fast capability to convert between the Celsius and Fahrenheit temperature systems.

Functions of the Program

The direction of the conversion is specified followed by the temperature that is to be converted. The converted temperature (in the other scale) is then printed.

Instructions for Use

Run the program and answer the questions asked.

Output Description

See example provided.

```
10 CALL CLEAR
20 REM   TEMPERATURE CONVERSION PROGRAM
30 REM   ***** DATA INITIALIZATION *****
40 F=32
50 C=0
60 REM   ***** PROCESSING AREA *****
70 PRINT "CELSIUS TO FAHRENHEIT(C)": "OR FAHRENHEIT TO": "CELSIUS(F)?"
80 INPUT T$
90 IF T$="C" THEN 150
100 PRINT "ENTER THE FAHRENHEIT": "TEMPERATURE"
110 INPUT F
120 C=(F-32)*5/9
130 PRINT "THE CELSIUS TEMPERATURE IS: ";C;" DEGREES"
140 GOTO 210
150 PRINT "ENTER THE CELSIUS": "TEMPERATURE"
160 INPUT C
170 F=(C*9/5)+32
180 PRINT "THE FAHRENHEIT TEMPERATURE": "IS: ";F;" DEGREES"
190 GOTO 210
200 REM   ***** PROGRAM TERMINATION POINT *****
210 PRINT
220 PRINT
230 STOP
```

```
C CELSIUS TO FAHRENHEIT(C)
D FAHRENHEIT TO
E CELSIUS(F)?
F
G ENTER THE FAHRENHEIT
H TEMPERATURE
I 1
J 100
K CELSIUS TEMPERATURE IS:
L 100
M DEGREES
```

```
C CELSIUS TO FAHRENHEIT(C)
D FAHRENHEIT TO
E CELSIUS(F)?
F
G ENTER THE FAHRENHEIT
H TEMPERATURE
I 1
J 100
K CELSIUS TEMPERATURE IS:
L 100
M DEGREES
```



```

C CELSIUS TO FAHRENHEIT<C>
L CELSIUS TO FAHRENHEIT TO
R CELSIUS<F>?
M FROM THE CELSIUS
T TEMPERATURE
H FROM FAHRENHEIT TEMPERATURE
I 212 DEGREES

```

MAJOR SYMBOL TABLE - TEMPERATURE CONVERSIONS

I	NAME	DESCRIPTION	I
I	T\$	CONVERSION TYPE (DIRECTION)	I
I	F	FAHRENHEIT TEMPERATURE	I
I	C	CELSIUS TEMPERATUE	I

MAJOR SYMBOL TABLE - CURRENCY CONVERSIONS

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I R	.. EXCHANGE RATE
I T\$	.. CURRENCY NAME
I S	.. MINIMUM DOLLAR VALUE TO PRINT
I F	.. MAXIMUM DOLLAR VALUE TO PRINT
I I	.. DOLLAR VALUE - OUT
I-----I	

FUNCTIONS USED

I-----I	
I NAME	.. DESCRIPTION
I-----I	
I TAB	.. FORMATS PRINT LINES
I-----I	

9

Recreational Programs

Dice Roller

Wordgame

Bingo

Dart Scoring

Tarot Card Dealer

Jogger Record

DICE ROLLER

Description

This program rolls dice and prints the results in dice image format.

Functions of the Program

The program randomly selects the values for the number of dice to be rolled and then prints images of the dice showing their results. Dice images are separate subroutines.

Instructions for Use

Run the program.

Output Description

See examples provided. Dice images are produced for the number of dice requested.

```
10 CALL CLEAR
20 REM DICE PROGRAM
30 REM DATA INITIALIZATION
40 DIM D(6)
50 Y=1
60 REM LOOP TO ROLL DICE
70 PRINT "ENTER THE NUMBER OF DICE TO ROLL"
80 INPUT D1
90 FOR R1=1 TO D1
100 A=R1*15
110 GOSUB 160
120 NEXT R1
130 REM PROGRAM TERMINATION          POINT
140 END
150 REM RANDOM ROLL GENERATOR
160 RANDOMIZE
170 LET Z=(RND*6+1)
180 LET D(R1)=INT(Z)
190 REM DICE PRINT OUT ROUTINE
200 IF D(R1)=1 THEN 280
210 IF D(R1)=2 THEN 340
220 IF D(R1)=3 THEN 400
230 IF D(R1)=4 THEN 460
240 IF D(R1)=5 THEN 520
250 IF D(R1)=6 THEN 580
260 RETURN
270 REM DICE IMAGE PRINT
280 PRINT TAB(A); "-----"
290 PRINT TAB(A); "I      I"
300 PRINT TAB(A); "I *  I"
310 PRINT TAB(A); "I      I"
320 PRINT TAB(A); "-----";
330 RETURN
340 PRINT TAB(A); "-----"
350 PRINT TAB(A); "I *  I"
360 PRINT TAB(A); "I      I"
370 PRINT TAB(A); "I *  I"
380 PRINT TAB(A); "-----";
390 RETURN
400 PRINT TAB(A); "-----"
410 PRINT TAB(A); "I *  I"
420 PRINT TAB(A); "I *  I"
430 PRINT TAB(A); "I *  I"
440 PRINT TAB(A); "-----";
```

```

450 RETURN
460 PRINT TAB(A); "-----"
470 PRINT TAB(A); "I * * I"
480 PRINT TAB(A); "I      I"
490 PRINT TAB(A); "I * * I"
500 PRINT TAB(A); "-----";
510 RETURN
520 PRINT TAB(A); "-----"
530 PRINT TAB(A); "I * * I"
540 PRINT TAB(A); "I * I"
550 PRINT TAB(A); "I * * I"
560 PRINT TAB(A); "-----";
570 RETURN
580 PRINT TAB(A); "-----"
590 PRINT TAB(A); "I * * I"
600 PRINT TAB(A); "I * * I"
610 PRINT TAB(A); "I * * I"
620 PRINT TAB(A); "-----";
630 RETURN

```

```

> RUN
PRINT
DICE
?

```

```

-----
I * * I
I * * I
I * * I
-----

```

```

> RUN
PRINT
DICE
2

```

```

-----
I * * I
I * * I
I * * I
-----

```

```

-----
I * * I
I * * I
I * * I
-----

```

```

> RUN
PRINT
DICE
3

```

```

-----
I * * I
I * * I
I * * I
-----

```

```

-----
I * * I
I * * I
I * * I
-----

```

```

-----
I * * I
I * * I
I * * I
-----

```

MAJOR SYMBOL TABLE - DICE ROLLER

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	D() .. RESULTS OF ROLL	I
I	Y .. SEED TO RANDOM NUMBER GENERATOR	I
I	D1 .. NUMBER OF DICE TO ROLL	I
I	R1 .. ROLL NUMBER	I
I	-----	I

FUNCTIONS USED

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	INT .. CONVERTS NUMBER TO INTEGER	I
I	RND .. GENERATES A NUMBER RANDOMLY	I
I	GOSUB .. BRANCHES TO AND RETURNS	I
I	DIM .. SINGLE DIMENSION ARRAYS	I
I	-----	I

WORDGAME

Description

The popular word search puzzle is automated by this useful home recreational program. You choose the level of complexity and the words to search for. The words that you enter during the program's execution will be randomly placed in the puzzle for you to find and circle. Don't be surprised if you find them (if you find them!) written in any direction, including backwards. No two puzzles are the same so family members will never tire of this educational and entertaining recreational program.

Functions of the Program

The program determines the size and complexity of the puzzle by your answers to the program's initial questions. It produces a puzzle with random selection of word location and direction. The filling in of blank spaces is also accomplished by the random selection of letters.

Instructions for Use

Run the program and answer the questions asked.

Data Entry

Words to be placed in the puzzle are entered through the keyboard.

Output Description

See example provided. Puzzle size is limited only by the available memory and size of the printing device.

```
10 CALL CLEAR
20 REM WORDGAME PROGRAM
30 PRINT "ENTER THE NUMBER OF COLUMNS": "IN THE WORD GAME (MAX OF 14)"
40 INPUT C
50 IF C>14 THEN 30
60 PRINT "ENTER THE NUMBER OF ROWS IN": "THE GAME (MAX OF 14)"
70 INPUT R
80 IF R>14 THEN 60
90 PRINT "ENTER THE NUMBER OF WORDS": "TO FIND"
100 INPUT N
110 REM ***** DATA INITIATION *****
120 DIM L$(20,20)
130 DIM W$(25)
140 DIM A$(26)
150 LET A$(1)="A"
160 LET A$(2)="B"
170 LET A$(3)="C"
180 LET A$(4)="D"
190 LET A$(5)="E"
200 LET A$(6)="F"
210 LET A$(7)="G"
220 LET A$(8)="H"
230 LET A$(9)="I"
240 LET A$(10)="J"
250 LET A$(11)="K"
260 LET A$(12)="L"
```



```

270 LET A$(13)="M"
280 LET A$(14)="N"
290 LET A$(15)="O"
300 LET A$(16)="P"
310 LET A$(17)="Q"
320 LET A$(18)="R"
330 LET A$(19)="S"
340 LET A$(20)="T"
350 LET A$(21)="U"
360 LET A$(22)="V"
370 LET A$(23)="W"
380 LET A$(24)="X"
390 LET A$(25)="Y"
400 LET A$(26)="Z"
410 FOR I=1 TO C
420 FOR J=1 TO R
430 L$(I,J)="."
440 NEXT J
450 NEXT I
460 FOR K=1 TO N
470 PRINT "ENTER WORD"
480 INPUT W$(K)
490 GOSUB 690
500 NEXT K
510 PRINT "I'LL SHOW YOU WHERE I'VE": "HIDDEN THE WORDS IF YOU SAY": "PLEASE"
520 INPUT B$
530 IF G$(">")"PLEASE" THEN 550
540 GOSUB 620
550 GOSUB 1480
560 PRINT
570 PRINT
580 GOSUB 620
590 REM ***** TERMINATION POINT *****
600 STOP
610 REM ***** PUZZLE PRINT ROUTINE *****
620 FOR J=1 TO R
630 FOR I=1 TO C
640 PRINT L$(I,J); " ";
650 NEXT I
660 PRINT
670 NEXT J
680 RETURN
690 REM ***** WORD BREAKDOWN ROUTINE *****
700 REM ***** SOME LANGUAGE DEPENDANCE IN THIS ROUTINE *****
710 REM
720 LET LO=LEN(W$(K))
730 REM ***** RANDOM SELECTION OF DIRECTION *****
740 LET T=1
750 IF T<100 THEN 780
760 PRINT "I COULN'T FIT THE WORDS": "IN-PLEASE TRY AGAIN."
770 GOTO 600
780 LET P=1
790 LET PQ=1
800 LET Q=-1
810 IF RND<=.5 THEN 830
820 LET Q=1
830 LET QO=-1
840 IF RND<=.5 THEN 860
850 LET QO=1
860 LET D=2
870 IF Q<>1 THEN 890
880 LET P=0
890 IF QO<>1 THEN 910
900 LET PQ=0
910 IF RND<.75 THEN 930
920 LET D=1
930 IF RND>.25 THEN 950
940 LET D=0
950 REM ***** RANDOM SELECTION OF START POINT *****
960 LET CO=C

```

```

970 LET RO=R
980 IF D<>1 THEN 1000
990 LET RO=R-LO
1000 IF D<>0 THEN 1020
1010 LET CO=C-LO
1020 IF D<>1 THEN 1050
1030 RO=R-LO
1040 CO=C-LO
1050 IF CO<>C THEN 1070
1060 LET PO=0
1070 IF RO<>R THEN 1100
1080 LET P=0
1090 RANDOMIZE
1100 LET Z1=(RND*RO/100+.01)*100+P*LO
1110 LET Z2=(RND*CO/100+.01)*100+PO*LO
1120 LET X1=INT(Z1)
1130 LET X2=INT(Z2)
1140 REM ***** ENTRY OF WORD IN PUZZLE *****
1150 IF D=1 THEN 1370
1160 IF D=0 THEN 1270
1170 FOR I=1 TO LO
1180 IF L$(X2+(I-1)*QO,X1+(I-1)*Q)="." THEN 1200
1190 IF L$(X2+(I-1)*QO,X1+(I-1)*Q)<>SEG$(W$(K),I,1) THEN 730
1200 NEXT I
1210 LET T=0
1220 FOR I=1 TO LO-1
1230 LET L$(X2+I*QO,X1+I*Q)=SEG$(W$(K),I+1,1)
1240 NEXT I
1250 LET L$(X2,X1)=SEG$(W$(K),1,1)
1260 GOTO 1460
1270 FOR I=1 TO LO
1280 IF L$(X2+(I-1)*QO,X1)="." THEN 1300
1290 IF L$(X2+(I-1)*QO,X1)<>SEG$(W$(K),I,1) THEN 730
1300 NEXT I
1310 LET T=0
1320 FOR I=1 TO LO-1
1330 LET L$(X2+I*QO,X1)=SEG$(W$(K),I+1,1)
1340 NEXT I
1350 LET L$(X2,X1)=SEG$(W$(K),1,1)
1360 GOTO 1460
1370 FOR I=1 TO LO
1380 IF L$(X2,X1+(I-1)*Q)="." THEN 1400
1390 IF L$(X2,X1+(I-1)*Q)<>SEG$(W$(K),I,1) THEN 730
1400 NEXT I
1410 LET T=0
1420 FOR I=1 TO LO-1
1430 LET L$(X2,X1+I*Q)=SEG$(W$(K),I+1,1)
1440 NEXT I
1450 LET L$(X2,X1)=SEG$(W$(K),1,1)
1460 RETURN
1470 REM ***** FILL THE REMAINING POSITIONS *****
1480 FOR I=1 TO C
1490 FOR J=1 TO R
1500 IF L$(I,J)<>"." THEN 1530
1510 LET Z1=(RND*.26+.01)*100
1520 LET L$(I,J)=A$(INT(Z1))
1530 NEXT J
1540 NEXT I
1550 REM ***** PRINT OF THE WORDS TO FIND *****
1560 PRINT
1570 PRINT "          WORD LIST"
1580 FOR K=1 TO N
1590 PRINT W$(K); " ";
1600 NEXT K
1610 RETURN

```


BINGO

Description

You'll never be without a BINGO game once you've entered this program.

Functions of the Program

BINGO cards are printed for the number of players requested, with randomly selected number placement for recording the numbers called. The program then proceeds to select random numbers to be called and prints these numbers each time the return for the next call is pressed until a "BINGO" is achieved.

Instructions for Use

Run the program, and continue to press the return for the next call until someone BINGOs. Enter the word "BINGO" to terminate the program.

Output Description

See example provided. The number of cards printed is determined by your input to the question. For checking purposes, a list of all numbers called is produced after the BINGO is achieved.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM          BINGO  PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1: "RS232.BA=9600.DA=8"
60 REM ***** DATA INITIALIZATION *****
70 Y=1
80 DIM C(2,75)
90 DIM A$(6)
100 READ A$(1),A$(2),A$(3),A$(4),A$(5)
110 DATA "B","I","N","G","O"
120 PRINT "DO YOU WISH TO HAVE CARDS":"PRINTED";
130 INPUT G$
140 IF G$="N" THEN 190
150 GOSUB 620
160 PRINT
170 PRINT
180 PRINT
190 PRINT "PRESS THE RETURN FOR THE":"NEXT CALL-OR-ENTER BINGO"
200 FOR IO=1 TO 75
210 INPUT B$
220 IF B$="BINGO" THEN 250
230 GOSUB 1050
240 NEXT IO
250 PRINT "NUMBERS CALLED"
260 PRINT
270 FOR I=1 TO 75
280 IF C(1,I)=0 THEN 300
290 PRINT A$(I/15+1);" -";I
300 NEXT I
```

```

310 PRINT
320 REM ***** TERMINATION POINT *****
330 STOP
340 REM ***** LINE PRINTING ROUTINE *****
350 FOR J=1 TO 2
360 PRINT #1:"-----" ;
370 NEXT J
380 PRINT
390 RETURN
400 REM ***** RANDOM DRAW OF CARDS *****
410 LET Z=(RND*((H-L)/100)+.01)*100+L
420 LET X=INT(Z)
430 IF C(K,X)<>0 THEN 400
440 LET C(K,X)=C(K,X)+1
450 RETURN
460 REM ***** ARRAY CLEARS AND FILLS *****
470 FOR L=1 TO 2
480 FOR K=1 TO 75
490 LET C(L,K)=0
500 NEXT K
510 NEXT L
520 FOR L=0 TO 60 STEP 15
530 LET H=L+15
540 FOR T=1 TO 5
550 FOR K=1 TO 2
560 GOSUB 400
570 NEXT K
580 NEXT T
590 NEXT L
600 RETURN
610 REM ***** CARD PRINT ROUTINE *****
620 PRINT "HOW MANY CARDS SHOULD I":"PRINT";
630 INPUT N
640 IF N=0 THEN 1040
650 PRINT "POSITION PAPER NOW"
660 INPUT B$
670 FOR I=1 TO N/2+.5
680 GOSUB 460
690 GOSUB 340
700 FOR J=1 TO 2
710 PRINT #1:"! ";A$(1);" ! ";
720 PRINT #1:A$(2);" ! ";A$(3);" ! ";A$(4);" ! ";A$(5);" !
730 NEXT J
740 PRINT #1
750 GOSUB 340
760 FOR K=1 TO 5
770 FOR J=1 TO 2
780 LET S=1
790 FOR L=1 TO 5
800 FOR M=S TO S+14
810 IF C(J,M)=0 THEN 920
820 IF M<10 THEN 890
830 IF K<>3 THEN 870
840 IF L<>3 THEN 870
850 PRINT #1:"! FRE ";
860 GOTO 900
870 PRINT #1:"! ";M;
880 GOTO 900
890 PRINT #1:"! ";M;" ";
900 LET C(J,M)=0
910 GOTO 930
920 NEXT M
930 LET S=S+15
940 NEXT L
950 PRINT #1:"! ";
960 NEXT J
970 PRINT #1
980 GOSUB 340
990 NEXT K
1000 PRINT #1

```

```

1010 PRINT #1
1020 PRINT #1
1030 NEXT I
1040 RETURN
1050 REM ***** RANDOM DRAWS FOR CALLS *****
1060 LET Z=(RND*.75+.01)*100
1070 LET X=INT(Z)
1080 IF C(1,X)<>0 THEN 1060
1090 LET C(1,X)=C(1,X)+1
1100 LET J=INT(X/15)+1
1110 PRINT A$(J);"-";X
1120 PRINT
1130 RETURN
1140 CLOSE #1

```

```

>RUN
DO YOU WISH TO HAVE CARDS
PRINTED? Y
HOW MANY CARDS SHOULD I
PRINT? 2
POSITION PAPER NOW
?

```

```

-----
! B ! I ! N ! G ! O !
-----
! 4 ! 18 ! 36 ! 48 ! 64 !
-----
! 8 ! 22 ! 38 ! 49 ! 66 !
-----
! 9 ! 26 ! FRE ! 57 ! 68 !
-----
! 11 ! 27 ! 43 ! 58 ! 69 !
-----
! 15 ! 28 ! 45 ! 59 ! 72 !
-----

```

```

-----
! B ! I ! N ! G ! O !
-----
! 1 ! 17 ! 31 ! 46 ! 65 !
-----
! 4 ! 21 ! 32 ! 53 ! 68 !
-----
! 6 ! 26 ! FRE ! 55 ! 69 !
-----
! 8 ! 27 ! 40 ! 57 ! 70 !
-----
! 9 ! 28 ! 42 ! 58 ! 73 !
-----

```

```

PRESS THE RETURN FOR THE
NEXT CALL-OR-ENTER BINGO
?

```

G- 47

?

B- 3

?

I- 15

?

I- 18

?

I- 26

?

N- 30

?

B- 12

```

? BINGO
NUMBERS CALLED

```

```

B - 3
I - 12
I - 15
I - 18
N - 26
N - 30
G - 47

```

MAJOR SYMBOL TABLE - BINGO

I	NAME	DESCRIPTION	I
I	C()	NUMBERS CALLED/ON CARDS ARRAY	I
I	A\$()	LETTER CALLED	I
I	IO	COUNTER OF NUMBER OF CALLS	I
I	B\$	BINGO INDICATOR	I
I	Y	SEED TO RANDOM NUMBER GENERATOR	I
I	Z	RANDOM NUMBER GENERATED	I
I	X	INTEGER OF RANDOM NUMBER	I
I	N	NUMBER OF CARDS TO PRINT	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	INT	CONVERTS NUMBER TO INTEGER	I
I	RND	GENERATES A RANDOM NUMBER	I
I	GOSUB	BRANCHES TO AND RETURNS	I
I	DIM	2 DIMENSION ARRAYS	I

DART SCORING

Description

This program acts as scorekeeper for a darts match between individuals or teams.

Functions of the Program

The program allows for variable starting points and player numbers. Total scores are printed and the scores of each player are requested and subtracted from the totals prior to printing.

Instructions for Use

Run the program, and respond to the program's messages.

Data Entry

All data is entered through the keyboard.

Output Description

See the example provided.

```
10 CALL CLEAR
20 REM      DART SCORING PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 DIM S(10)
60 PRINT "ARE YOU PLAYING AS":"INDIVIDUALS (I), OR TEAMS":"(T)?"
70 INPUT A$
80 T$="PLAYER"
90 IF A$="I" THEN 110
100 T$="TEAM"
110 PRINT "HOW MANY ";T$;"S ARE PLAYING?"
120 INPUT N
130 PRINT "WHAT WILL YOU START WITH":"301, OR 501?"
140 INPUT S1
150 FOR I=1 TO N
160 S(I)=S1
170 NEXT I
180 PRINT
190 PRINT
200 PRINT
210 REM *****
220 REM ***** PROCESSING STARTS *****
230 FOR K=1 TO M
240 PRINT
250 FOR I=1 TO N
260 PRINT TAB(10*(I-1));T$;I;
270 NEXT I
280 PRINT
290 FOR I=1 TO N
300 PRINT TAB(10*(I-1)+1);S(I);
310 NEXT I
320 PRINT
330 PRINT
340 FOR I=1 TO N
350 PRINT "ENTER THE SCORE FOR":"PLAYER #";I;
360 INPUT S1
370 IF S1<0 THEN 390
380 IF S(I)-S1>=0 THEN 410
```



```

390 PRINT "ILLEGAL SCORE - TRY AGAIN"
400 GOTO 350
410 S(I)=S(I)-S1
420 IF S(I)=0 THEN 450
430 NEXT I
440 NEXT K
450 PRINT "PLAYER";I;"WINS"
460 PRINT "ARE YOU PLAYING AGAIN?"
470 INPUT A$
480 IF A$="Y" THEN 130
490 REM *****
500 REM ***** PROGRAM TERMINATION POINT *****
510 PRINT
520 PRINT
530 STOP

```

```

ARE YOU PLAYING AS
INDIVIDUALS (I), OR TEAMS
(T)?
? T
HOW MANY TEAMS ARE PLAYING?
? 2
WHAT WILL YOU START WITH
301, OR 501?
? 301

```

```

TEAM 1    TEAM 2
 301      301

```

```

ENTER THE SCORE FOR
PLAYER # 1 ? 100
ENTER THE SCORE FOR
PLAYER # 2 ? 50

```

```

TEAM 1    TEAM 2
 201      251

```

```

ENTER THE SCORE FOR
PLAYER # 1 ? 100
ENTER THE SCORE FOR
PLAYER # 2 ? 50

```

```

TEAM 1    TEAM 2
 101      201

```

```

ENTER THE SCORE FOR
PLAYER # 1 ? 99
ENTER THE SCORE FOR
PLAYER # 2 ? 50

```

```

TEAM 1    TEAM 2
 2        151

```

```

ENTER THE SCORE FOR
PLAYER # 1 ? 3
ILLEGAL SCORE - TRY AGAIN
ENTER THE SCORE FOR
PLAYER # 1 ? 2
PLAYER 1 WINS
ARE YOU PLAYING AGAIN?
? N

```

MAJOR SYMBOL TABLE - DART SCORING

-----I	
I NAME	.. DESCRIPTION
-----I	
I M	.. MAXIMUM NUMBER OF SCORING ITERATIONS
I T\$	.. PLAYER/TEAM HEADING
I N	.. NUMBER PLAYING
I S1	.. STARTING SCORE/SCORE PER PLAY
I S()	.. SCORE ARRAY
I I	.. PLAYER INDICATOR
-----I	

FUNCTIONS USED

-----I	
I NAME	.. DESCRIPTION
-----I	
I TAB	.. FORMATS PRINT LINES
I DIM	.. SINGLE DIMENSION ARRAY
-----I	

TAROT CARD DEALER

Description

This program shuffles and deals—for the user—the requested number of cards from a Tarot deck.

Functions of the Program

The program initializes data through line number 700. The cards are then shuffled until the user “feels” that they are right. The program then prints the number of cards requested.

Instructions for Use

Run the program and respond to the program’s messages.

Data Entry

All data is entered through the keyboard.

Output Description

See example provided. Cards are printed one at a time or continuously, with the “REVERSED” indicator shown when appropriate.

```
5 CALL CLEAR
10 REM          TAROT PROGRAM
20 REM ***** DATA INITIALIZATION *****
30 DIM C(78)
40 DIM S$(78)
50 DIM N$(78)
60 FOR K0=1 TO 5
70 FOR K=1 TO 14
80 LET K1=(K0-1)*14
90 LET N$(K1+1)="I"
100 LET N$(K1+2)="II"
110 LET N$(K1+3)="III"
120 LET N$(K1+4)="IV"
130 LET N$(K1+5)="V"
140 LET N$(K1+6)="VI"
150 LET N$(K1+7)="VII"
160 LET N$(K1+8)="VIII"
170 LET N$(K1+9)="IX"
180 LET N$(K1+10)="X"
190 LET N$(K1+11)="PAGE"
200 LET N$(K1+12)="KNIGHT"
210 LET N$(K1+13)="QUEEN"
220 LET N$(K1+14)="KING"
230 NEXT K
240 NEXT K0
250 LET N$(67)="XI"
260 LET N$(68)="XII"
270 LET N$(69)="XIII"
280 LET N$(70)="XIV"
290 LET N$(71)="XV"
300 LET N$(72)="XVI"
310 LET N$(73)="XVII"
320 LET N$(74)="XVIII"
330 LET N$(75)="XIX"
340 LET N$(76)="XX"
350 LET N$(77)="XXI"
360 LET N$(78)="0"
```

```

370 FOR I=1 TO 14
380 S$(I)="OF PENTACLES"
390 NEXT I
400 FOR I=15 TO 28
410 S$(I)="OF SWORDS"
420 NEXT I
430 FOR I=29 TO 42
440 S$(I)="OF CUPS"
450 NEXT I
460 FOR I=43 TO 56
470 S$(I)="OF WANDS"
480 NEXT I
490 LET S$(57)="THE MAGICIAN"
500 LET S$(58)="THE HIGH PRIESTESS"
510 LET S$(59)="THE EMPRESS"
520 LET S$(60)="THE EMPEROR"
530 LET S$(61)="THE HIEROPHANT"
540 LET S$(62)="THE LOVERS"
550 LET S$(63)="THE CHARIOT"
560 LET S$(64)="JUSTICE"
570 LET S$(65)="THE HERMIT"
580 LET S$(66)="WHEEL OF FORTUNE"
590 LET S$(67)="STRENGTH"
600 LET S$(68)="HANGED MAN"
610 LET S$(69)="DEATH"
620 LET S$(70)="TEMPERANCE"
630 LET S$(71)="THE DEVIL"
640 LET S$(72)="THE TOWER"
650 LET S$(73)="THE STAR"
660 LET S$(74)="THE MOON"
670 LET S$(75)="THE SUN"
680 LET S$(76)="JUDGEMENT"
690 LET S$(77)="THE WORLD"
700 LET S$(78)="THE FOOL"
710 Y=1
720 PRINT "ENTER THE NUMBER OF CARDS TO":"BE DEALT"
730 INPUT N
740 REM ***** LOOP TO SELECT CARDS *****
750 FOR J1=1 TO N
760 GOSUB 1070
770 NEXT J1
780 PRINT "THE CARDS HAVE BEEN SHUFFLED":"DO YOU WISH A RE-SHUFFLE":"(Y OR N)"
790 INPUT G$
800 IF G$="N" THEN 860
810 PRINT "THE CARDS ARE BEING":"RE-SHUFFLED NOW"
820 FOR I=1 TO 78
830 C(I)=0
840 NEXT I
850 GOTO 750
860 PRINT "DO YOU WISH TO SEE ALL OF":"THE CARDS AT ONCE (Y OR N)"
870 INPUT G$
880 IF G$="Y" THEN 900
890 PRINT "PRESS ENTER TO TURN OVER THE":"CARDS"
900 REM ***** ROUTINE TO FIND AND PRINT THE CARDS *****
910 FOR J=1 TO N
920 IF G$<>"N" THEN 940
930 INPUT H$
940 FOR U=1 TO 78
950 IF C(U)<>J THEN 1020
960 M$="      "
970 IF RND<.5 THEN 990
980 LET M$="(REVERSED)"
990 PRINT "CARD#";J;" IS. ";N$(U);" ";S$(U);" ";M$
1000 REM
1010 GOTO 1030
1020 NEXT U
1030 NEXT J
1040 REM ***** PROGRAM TERMINATION POINT *****
1050 STOP
1060 REM ***** RANDOM CARD SELECTION ROUTINE *****

```


JOGGER RECORD

Description

The jogger or jogging family will find this a useful addition to the program library. The program produces a graphic display of their jogging activities.

Functions of the Program

The program reads the data items and produces a graphic output representing the distance traveled and either speed or time indicators. The program prints daily results and consequently considers days not recorded in the output.

Instructions for Use

Enter your jogging activity at the time it occurs as DATA statements to the program.

Data Entry

All data is entered by means of DATA statements.

Data Format

The format of the data is:

Month-Day-Year (numeric), Miles, Whole hours run,
Additional minutes run

Note the 0 indicator for the end of data.

Output Description

See examples provided. Separate outputs are produced based upon the speed or time option selected. The asterisks, *** (as shown), are used to indicate performance and are scaled to indicate time run or miles/hour. To change the scaling factor, change the values of variables S1 and S2 in the program.

(Note: This program was designed for printer's output; for screen's output, some format modifications are necessary.)

```
10 CALL CLEAR
20 REM          JOGGER  PROGRAM
30 REM ***** OPEN STATEMENT FOR PRINTER *****
40 REM *** CHECK YOUR PRINTER MANUAL FOR CORRECT STATEMENT ***
50 OPEN #1:"RS232.BA=9600.DA=B"
60 LET S1=4
70 LET N=32000
80 DIM M$(12)
90 DIM D(12)
100 FOR I=1 TO 12
110 READ M$(I),D(I)
120 NEXT I
130 PRINT "ARE YOU INTERESTED IN SPEED": "OR TIME"
140 INPUT G$
```

```

150 PRINT
160 PRINT "ALIGN FOR PRINTING"
170 INPUT X$
180 PRINT
190 PRINT #1:"                D I S T A N C E";
200 IF G$="SPEED" THEN 250
210 LET S2=12
220 PRINT #1:TAB(53);"T I M E"
230 PRINT #1:" DATA                ";S1;"*/MILE";TAB(50);S2;"*/MINUTE"
240 GOTO 290
250 LET S2=1
260 PRINT #1:TAB(53);" S P E E D "
270 PRINT #1:"DATE                ";S1;"*/MILE";TAB(53);S2;"*/MINUTE"
280 PRINT #1:"                MILES";TAB(64);"MINISEC"
290 REM ***** PROCESSING AREA *****
300 PRINT
310 FOR I=1 TO N
320 READ CO
330 IF CO=0 THEN 910
340 READ MO
350 READ TO,T1
360 LET T1=T1+TO*60
370 LET E1=T1/(60/S2)
380 LET E2=T1
390 IF G$("<"SPEED" THEN 460
400 LET E1=T1/S2
410 LET T2=T1*60
420 LET M2=(T1*60)/MO
430 LET M3=INT(M2/60)
440 LET M4=INT(INT((M2/60-M3)*100)*.6)
450 LET E1=M3/S2
460 LET M1=INT(CO/10000)
470 LET CO=CO-M1*10000
480 LET D1=INT(CO/100)
490 LET CO=CO-D1*100
500 LET Y1=INT(CO)
510 IF Y1/4=INT(Y1/4) THEN 530
520 LET D(2)=D(2)+1
530 GOSUB 690
540 PRINT #1:M$(M1);D1;TAB(8);"I";
550 FOR J=1 TO MO*S1
560 PRINT #1:"*";
570 NEXT J
580 PRINT #1:TAB(34);M0;
590 PRINT #1:TAB(41);"I";
600 FOR J=1 TO E1
610 PRINT #1:"*";
620 NEXT J
630 IF G$="SPEED" THEN 660
640 PRINT #1:TAB(65);"(";E2;")"
650 GOTO 670
660 PRINT #1:TAB(63);M3;" ";M4
670 NEXT I
680 REM ***** CATCH UP ROUTINE FOR DAYS MISSED *****
690 IF S9=0 THEN 860
700 IF D1=S9+1 THEN 880
710 IF D1>S9+1 THEN 740
720 D5=D(S8)
730 GOTO 750
740 LET D5=D1-1
750 IF S9+1>D5 THEN 790
760 FOR L=S9+1 TO D5
770 PRINT #1:M$(S8);L;TAB(8);"I";TAB(41);"I"
780 NEXT L
790 IF M1=S8 THEN 880
800 S9=0
810 LET S8=S8+1
820 IF S8<13 THEN 700
830 LET S8=1
840 LET S7=S7+1

```

```

850 GOTO 700
860 LET S7=Y1
870 LET S8=M1
880 LET S9=D1
890 RETURN
900 REM ***** TERMINATION POINT *****
910 STOP
920 REM *****
930 REM DATA FOR INITIALIZATION
940 REM *****
950 DATA JAN,31,FEB,28,MAR,31,APR,30,MAY,31,JUN,30,JUL,31,AUG,31
960 DATA SEP,30,OCT,31,NOV,30,DEC,31
970 REM ***** DATA ENTRIES FOLLOW *****
980 DATA 112878,3,1,0
990 DATA 120178,3,1,0
1000 DATA 120278,4,1,0
1010 DATA 120378,4,0,55
1020 DATA 120578,4,1,05
1030 DATA 121278,4,1,15
1040 DATA 121378,5,1,30
1050 DATA 121478,6,1,40
1060 DATA 121678,4,0,59
1070 DATA 121778,4,1,0
1080 DATA 121878,3,1,0
1090 DATA 121978,3,1,5
1100 DATA 122078,3,1,5
1110 DATA 122178,3,0,59
1120 DATA 122278,3,0,57
1130 DATA 122378,3,0,55
1140 DATA 122578,4,1,10
1150 DATA 122678,3,1,0
1160 DATA 122878,4,0,50
1170 DATA 122978,5,1,10
1180 DATA 123178,1.75,0,30
1190 DATA 010379,1,0,15
1200 DATA 0

```



```

>RUN ARE YOU INTERESTED IN SPEED
OR TIME
? TIME
ALIGN FOR PRINTING
?

```

DATA	D I S T A N C E 4 */MILE	T I M E 12 */MINUTE
NOV 28 I*****	3	I***** (60)
NOV 29 I		I
NOV 30 I		I
DEC 1 I*****	3	I***** (60)
DEC 2 I*****	4	I***** (60)
DEC 3 I*****	4	I***** (55)
DEC 4 I		I
DEC 5 I*****	4	I***** (65)
DEC 6 I		I
DEC 7 I		I
DEC 8 I		I
DEC 9 I		I
DEC 10 I		I
DEC 11 I		I
DEC 12 I*****	4	I***** (75)
DEC 13 I*****	5	I***** (90)
DEC 14 I*****	6	I***** (100)
DEC 15 I		I
DEC 16 I*****	4	I***** (59)
DEC 17 I*****	4	I***** (60)
DEC 18 I*****	3	I***** (60)
DEC 19 I*****	3	I***** (65)
DEC 20 I*****	3	I***** (65)
DEC 21 I*****	3	I***** (59)
DEC 22 I*****	3	I***** (57)
DEC 23 I*****	3	I***** (55)
DEC 24 I		I
DEC 25 I*****	4	I***** (70)
DEC 26 I*****	3	I***** (60)
DEC 27 I		I
DEC 28 I*****	4	I***** (50)
DEC 29 I*****	5	I***** (70)
DEC 30 I		I
DEC 31 I*****	1.75	I***** (30)
JAN 1 I		I
JAN 2 I		I
JAN 3 I****	1	I**** (15)

MAJOR SYMBOL TABLE - JOGGER RECORD

I	NAME	DESCRIPTION	I
I	S1	.. SPEED SCALING FACTOR	I
I	S2	.. TIME SCALING FACTOR	I
I	N	.. MAXIMUM NUMBER OF DATA READS	I
I	M\$()	.. MONTH NAME ARRAY	I
I	D()	.. DAYS IN MONTH ARRAY	I
I	CO	.. DATE	I
I	M0	.. MILES RUN	I
I	T0	.. HOURS RUN	I
I	T1	.. MINUTES RUN	I
I	E1	.. NUMBER OF * TO PRINT	I
I	E2	.. DISTANCE OUT	I
I	M3	.. HOURS OUT	I
I	M4	.. MINUTES OUT	I
I	M1	.. MONTH	I
I	D1	.. DAY	I
I	Y1	.. YEAR	I
I	D5	.. CATCHUP DAYS FOR THOSE MISSED	I
I	S7	.. YEAR NUMBER	I
I	S8	.. MONTH	I
I	S9	.. DAY	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINE	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	GOSUB	.. BRANCHES AND RETURNS	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

10

Hobbyist's Diaries

Golf
Fishing
Photography
Greenhouse
CB Radio
Bowling
General Purpose Diary

GOLF

Description

This program produces a diary for the golf enthusiast. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted print of all, or selected, items from the data records. Supplemental items can be defined by indicating the number of items and their names in the first data record. Supplemental items can then be read and printed in the same way as the standard items.

Instructions for Use

Prior to running the program, define the supplemental data items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered using DATA statements.

Data Formats

See the sample data. The first record defines supplemental items and their titles:

Number of items, Title 1, Title 2, etc.

Diary entries are then recorded in the following form:

Date, Course name, Score, Supplemental value 1, value 2, etc.

Output Description

See example provided. Print options allow all or selected items to be printed.

```
10 CALL CLEAR
20 REM   GOLFER'S DIARY PROGRAM
30 REM   ***** DATA INITIALIZATION *****
40 K1=0
50 M=1000
60 DIM S$(10)
70 DIM H$(10)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110 READ H$(K)
120 NEXT K
130 PRINT "SHALL I PRINT ALL OF THE":"ITEMS ( Y OR N )?"
140 INPUT A$
150 IF A$="Y" THEN 330
160 PRINT "SHALL WE SELECT BASED UPON":"COURSE (C) OR OTHER (O)?"
170 INPUT X2$
180 IF X2$="C" THEN 290
190 PRINT "ENTER THE ITEM HEADING TO":"SEARCH FOR"
200 INPUT X1$
```

```

210 IF N=0 THEN 270
220 FOR K=1 TO N
230 IF X1$<>H$(K) THEN 250
240 K1=K
250 NEXT K
260 IF K1<>0 THEN 300
270 PRINT "ITEM HEADING NOT FOUND -";"TRY AGAIN"
280 GOTO 130
290 X1$="COURSE"
300 PRINT "ENTER THE VALUE OF ";X1$;" TO PRINT"
310 INPUT X$
320 REM ***** HEADINGS *****
330 PRINT
340 PRINT
350 PRINT
360 PRINT "DATE";TAB(7);"COURSE";TAB(14);"SCORE";
370 IF N=0 THEN 410
380 FOR K=1 TO N
390 PRINT TAB((K-1)*5+20);H$(K);
400 NEXT K
410 PRINT
420 PRINT "-----"
430 IF N=0 THEN 470
440 FOR K=1 TO N
450 REM
460 NEXT K
470 PRINT
480 IF A$="N" THEN 720
490 REM *****
500 REM ***** PRINT OF ALL ITEMS *****
510 FOR I=1 TO M
520 READ D$
530 IF D$="END" THEN 670
540 READ C$,S
550 IF N=0 THEN 590
560 FOR K=1 TO N
570 READ S$(K)
580 NEXT K
590 PRINT D$;TAB(7);C$;TAB(14);S;
600 IF N=0 THEN 640
610 FOR K=1 TO N
620 PRINT TAB((K-1)*5+20);S$(K);
630 NEXT K
640 PRINT
650 NEXT I
660 REM *****
670 REM ***** PROGRAM TERMINATION POINT *****
680 PRINT
690 PRINT
700 STOP
710 REM *****
720 REM ***** PRINT SELECTED ITEMS *****
730 FOR I=1 TO M
740 READ D$
750 IF D$="END" THEN 830
760 READ C$,S
770 FOR K=1 TO N
780 IF N=0 THEN 800
790 READ S$(K)
800 IF K1<>0 THEN 830
810 X3$=C$
820 GOTO 850
830 IF K<>K1 THEN 850
840 X3$=S$(K)
850 NEXT K
860 IF X$<>X3$ THEN 930
870 PRINT D$;TAB(7);C$;TAB(14);S;
880 IF N=0 THEN 920
890 FOR J=1 TO N
900 PRINT TAB((J-1)*4+21);S$(J);

```

```

910 NEXT J
920 PRINT
930 NEXT I
940 GOTO 670
950 REM *****
960 REM ***** DATA FOR INITIALIZATION FOLLOWS *****
970 REM ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS FIRST
980 DATA 2,WIND,TEMP
990 REM *****
1000 DATA JUL 1,LINCOLN,77,HI,HI
1010 DATA JUL 3,VALLEY,79,LO,LO
1020 DATA JUL 6,LINCOLN,78,MED,MED
1030 DATA JUL 8,VALLEY,66,LO,LO
1040 DATA END,, ,

```

```

>RUN
SHALL I PRINT ALL OF THE
ITEMS ( Y OR N )?
?Y

```

```

DATE COURSE SCORE WIND TEMP
-----

```

```

JUL 1 LINCOLN 77 HI HI
JUL 3 VALLEY 79 LO LO
JUL 6 LINCOLN 78 MED MED
JUL 8 VALLEY 66 LO LO

```

```

>RUN
SHALL I PRINT ALL OF THE
ITEMS ( Y OR N )?
?N
SHALL WE SELECT BASED UPON
COURSE (C) OR OTHER (O)?
?O
ENTER THE ITEM HEADING TO
SEARCH FOR
?WIND
ENTER THE VALUE OF WIND TO PRINT
?LO

```

```

DATE COURSE SCORE WIND TEMP
-----

```

```

JUL 3 VALLEY 79 LO LO
JUL 8 VALLEY 66 LO LO

```

MAJOR SYMBOL TABLE - GOLF

```

I-----I
I NAME .. DESCRIPTION I
I-----I
I K1 .. COUNT INDICATOR I
I M .. MAXIMUM NUMBER OF DATA READS I
I S$( ) .. SUPPLEMENTAL ITEM TRANSACTION VALUE I
I H$( ) .. SUPPLEMENTAL ITEM HEADING NAME I
I N .. NUMBER OF SUPPLEMENTAL ITEMS I
I D$ .. TRANSACTION DATE I
I C$ .. TRANSACTION COURSE I
I S .. TRANSACTION SCORE I
I X2$ .. STANDARD ITEM TO SELECT I
I X1$ .. SUPPLEMENTAL HEADING TO SELECT I
I X$ .. VALUE OF ITEM TO SELECT I
I-----I

```

FUNCTIONS USED

I NAME	.. DESCRIPTION

I TAB	.. FORMATS PRINT LINES
I DIM	.. SINGLE DIMENSION ARRAYS

FISHING

Description

This program produces a diary for the fisherman. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted output of all, or selected, items from the data records. Supplemental items can be defined by indicating the number of items and their names in the first data record. Supplemental items can then be read and printed in the same way as the standard items.

Instructions for Use

Prior to running the program, define the supplemental data items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

See the sample data. The first record defines supplemental items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then recorded in the following form:

Month, Day, Species, Weight, Length, Lure, Place,
Supplemental value 1, value 2, etc.

Output Description

See example provided. Print options allow all or selected items to be printed.

```
10 CALL CLEAR
20 REM      FISHERMAN'S DIARY PROGRAM
30 REM      ***** DATA INITIALIZATION *****
40 K1=0
50 M=1000
60 DIM G$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110 READ H$(K)
120 NEXT K
130 PRINT "SHALL I PRINT ALL OF THE"; "ITEMS ( Y OR N )?"
140 INPUT A$
150 IF A$="Y" THEN 350
160 PRINT "SHALL WE SELECT BASED UPON:"
170 PRINT "SPECIES(S) "
180 PRINT "OR OTHER (O)?" ;
190 INPUT X2$
200 IF X2$="S" THEN 310
```

```

210 PRINT "ENTER THE ITEM HEADING TO"; "SEARCH FOR"
220 INPUT X1$
230 IF N=0 THEN 290
240 FOR K=1 TO N
250 IF X1$(<>)H$(K) THEN 270
260 K1=K
270 NEXT K
280 IF K1<>0 THEN 320
290 PRINT "ITEM HEADING NOT FOUND -"; "TRY AGAIN"
300 GOTO 130
310 X1$="SPECIES"
320 PRINT "ENTER THE "; X1$; " TO PRINT"
330 INPUT X$
340 REM ***** HEADINGS *****
350 PRINT
360 PRINT
370 PRINT
380 PRINT "SPECIES"; TAB(9); "WT"; TAB(13); "LEN"; TAB(18); "LURE";
390 IF N=0 THEN 430
400 FOR K=1 TO N
410 PRINT TAB((K-1)*5+23); H$(K);
420 NEXT K
430 PRINT
440 PRINT "-----"
450 IF N=0 THEN 480
460 FOR K=1 TO N
470 NEXT K
480 PRINT
490 IF A$="N" THEN 730
500 REM *****
510 REM ***** PRINT OF ALL ITEMS *****
520 FOR I=1 TO M
530 READ F$
540 IF F$="END" THEN 680
550 READ W$, L, B$
560 IF N=0 THEN 600
570 FOR K=1 TO N
580 READ Q$(K)
590 NEXT K
600 PRINT F$; TAB(9); W$; TAB(12); L; TAB(18); B$;
610 IF N=0 THEN 650
620 FOR K=1 TO N
630 PRINT TAB((K-1)*5+23); Q$(K);
640 NEXT K
650 PRINT
660 NEXT I
670 REM *****
680 REM ***** PROGRAM TERMINATION POINT *****
690 PRINT
700 PRINT
710 STOP
720 REM *****
730 REM ***** PRINT SELECTED ITEMS *****
740 FOR I=1 TO M
750 READ F$
760 IF F$="END" THEN 680
770 READ W$, L, B$
780 FOR K=1 TO N
790 IF N=0 THEN 810
800 READ Q$(K)
810 IF K1<>0 THEN 840
820 X3$=F$
830 GOTO 860
840 IF K<>K1 THEN 860
850 X3$=Q$(K)
860 NEXT K
870 IF X$(<>)X3$ THEN 940
880 PRINT F$; TAB(9); W$; TAB(12); L; TAB(18); B$;
890 IF N=0 THEN 930
900 FOR J=1 TO N

```


FUNCTIONS USED

I	-----	I
I	NAME .. DESCRIPTION	I
I	-----	I
I	TAB .. FORMATS PRINT LINES	I
I	DIM .. SINGLE DIMENSION ARRAYS	I
I	-----	I

PHOTOGRAPHY

Description

This program produces a diary for the photographer. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted output of all, or selected, items from the data records. Supplemental items can be defined by indicating the number of items and their names in the first data record. Supplemental items can then be read and printed in the same way as the standard items.

Instructions for Use

Prior to running the program, define the supplemental data items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

See the sample data. The first record defines supplemental items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then recorded in the following form:

Picture number, Subject, Date, Supplemental value 1, value 2, etc.

Output Description

See example provided. Print options allow all, or selected, items to be printed.

```
10 CALL CLEAR
20 REM PHOTOGRAPHER'S DIARY PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 K1=0
50 M=1000
60 DIM Q$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110 READ H$(K)
120 NEXT K
130 PRINT "SHALL I PRINT ALL OF THE": "ITEMS ( Y OR N )?"
140 INPUT A$
150 IF A$="Y" THEN 370
160 PRINT "SHALL WE SELECT BASED UPON": "PICTURE # (P), SUBJECT (S),";
170 PRINT "OR OTHER (O)"
180 INPUT X2$
190 IF X2$="P" THEN 310
200 IF X2$="S" THEN 330
210 PRINT "ENTER THE ITEM HEADING TO": "SEARCH FOR"
220 INPUT X1$
```

```

230 IF N=0 THEN 290
240 FOR K=1 TO N
250 IF X1$<>H$(K) THEN 270
260 K1=K
270 NEXT K
280 IF K1<>0 THEN 340
290 PRINT "ITEM HEADING NOT FOUND -"; "TRY AGAIN"
300 GOTO 130
310 X1$="PICTURE #"
320 GOTO 340
330 X1$="SUBJECT"
340 PRINT "ENTER THE VALUE OF ";X1$; " TO PRINT"
350 INPUT X$
360 REM ***** HEADINGS *****
370 PRINT
380 PRINT
390 PRINT
400 PRINT "PICT#"; TAB(7); "SUBJECT"; TAB(15); "DATE";
410 IF N=0 THEN 450
420 FOR K=1 TO N
430 PRINT TAB((K-1)*4+20); H$(K);
440 NEXT K
450 PRINT
460 PRINT "-----"
470 IF N=0 THEN 510
480 FOR K=1 TO N
490 REM
500 NEXT K
510 PRINT
520 IF A$="N" THEN 760
530 REM *****
540 REM ***** PRINT OF ALL ITEMS *****
550 FOR I=1 TO M
560 READ P$
570 IF P$="END" THEN 710
580 READ S$,D$
590 IF N=0 THEN 630
600 FOR K=1 TO N
610 READ Q$(K)
620 NEXT K
630 PRINT P$; TAB(6); S$; TAB(14); D$;
640 IF N=0 THEN 680
650 FOR K=1 TO N
660 PRINT TAB((K-1)*4+20); Q$(K);
670 NEXT K
680 PRINT
690 NEXT I
700 REM *****
710 REM ***** PROGRAM TERMINATION POINT *****
720 PRINT
730 PRINT
740 STOP
750 REM *****
760 REM ***** PRINT SELECTED ITEMS *****
770 FOR I=1 TO M
780 READ P$
790 IF P$="END" THEN 710
800 READ S$,D$
810 FOR K=1 TO N
820 IF N=0 THEN 840
830 READ Q$(K)
840 IF K1<>0 THEN 900
850 IF X2$<>"P" THEN 880
860 X3$=P$
870 GOTO 920
880 X3$=S$
890 GOTO 920
900 IF K>K1 THEN 920
910 X3$=Q$(K)
920 NEXT K

```


FUNCTIONS USED

-----I	
I NAME	.. DESCRIPTION
-----I	
I TAB	.. FORMATS PRINT LINES
I DIM	.. SINGLE DIMENSION ARRAYS
-----I	

GREENHOUSE

Description

This program produces a diary for the horticulturist's greenhouse. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted output of all, or selected, data records. Supplemental items can be defined by indicating the number of items, and their names, in the first data record. Supplemental items can then be read and printed in the same way as standard items.

Instructions for Use

Prior to running the program, define the supplemental items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

See the sample data. The first record defines supplemental items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then recorded in the following form:

Plant name, Container number, Date, Supplemental value 1, etc.

Output Description

See example provided. Print options allow all, or selected, records to be printed.

```
10 CALL CLEAR
20 REM   HORTICULTURIST'S DIARY PROGRAM
30 REM   ***** DATA INITIALIZATION *****
40 K1=0
50 M=1000
60 DIM Q$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110 READ H$(K)
120 NEXT K
130 PRINT "SHALL I PRINT ALL OF THE": "ITEMS ( Y OR N )?"
140 INPUT A$
150 IF A$="Y" THEN 370
160 PRINT "SHALL WE SELECT BASED UPON": "PLANT NAME (P), NUMBER (N), ";
170 PRINT "OR OTHER (O) "
180 INPUT X2$
190 IF X2$="P" THEN 310
200 IF X2$="N" THEN 330
```

```

210 PRINT "ENTER THE ITEM HEADING TO": "SEARCH FOR"
220 INPUT X1$
230 IF N=0 THEN 290
240 FOR K=1 TO N
250 IF X1$(<)>H$(K) THEN 270
260 K1=K
270 NEXT K
280 IF K1<>0 THEN 340
290 PRINT "ITEM HEADING NOT FOUND -": "TRY AGAIN"
300 GOTO 130
310 X1$="PLANT NAME"
320 GOTO 340
330 X1$="NUMBER"
340 PRINT "ENTER THE VALUE OF ";X1$; " TO PRINT"
350 INPUT X$
360 REM ***** HEADINGS *****
370 PRINT
380 PRINT
390 PRINT
400 PRINT "PLANT";TAB(9);"NBR";TAB(13);"DATE";
410 IF N=0 THEN 450
420 FOR K=1 TO N
430 PRINT TAB((K-1)*6+19);H$(K);
440 NEXT K
450 PRINT
460 PRINT "-----"
470 IF N=0 THEN 510
480 FOR K=1 TO N
490 REM
500 NEXT K
510 PRINT
520 IF A$="N" THEN 760
530 REM *****
540 REM ***** PRINT OF ALL ITEMS *****
550 FOR I=1 TO M
560 READ P$
570 IF P$="END" THEN 710
580 READ N$,D$
590 IF N=0 THEN 630
600 FOR K=1 TO N
610 READ Q$(K)
620 NEXT K
630 PRINT P$;TAB(9);N$;TAB(12);D$;
640 IF N=0 THEN 680
650 FOR K=1 TO N
660 PRINT TAB((K-1)*6+19);Q$(K);
670 NEXT K
680 PRINT
690 NEXT I
700 REM *****
710 REM ***** PROGRAM TERMINATION POINT *****
720 PRINT
730 PRINT
740 STOP
750 REM *****
760 REM ***** PRINT SELECTED ITEMS *****
770 FOR I=1 TO M
780 READ P$
790 IF P$="END" THEN 710
800 READ N$,D$
810 FOR K=1 TO N
820 IF N=0 THEN 840
830 READ Q$(K)
840 IF K1<>0 THEN 900
850 IF X2$(">")P" THEN 880
860 X3$=P$
870 GOTO 920
880 X3$=N$
890 GOTO 920
900 IF K<>K1 THEN 920

```

```

910 X3#=Q$(K)
920 NEXT K
930 IF X#<>X3# THEN 1000
940 PRINT P$;TAB(9);N$;TAB(12);D$;
950 IF N=0 THEN 990
960 FOR J=1 TO N
970 PRINT TAB((J-1)*6+19);Q$(J);
980 NEXT J
990 PRINT
1000 NEXT I
1010 GOTO 710
1020 REM *****
1030 REM ***** DATA FOR INITIALIZATION FOLLOWS *****
1040 REM ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS FIRST
1050 DATA 2,WATER,SOIL
1060 REM *****
1070 DATA LETTUCE,1,APR 15,DAILY,SAND
1080 DATA LETTUCE,2,APR 15,DAILY,LOAM
1090 DATA LETTUCE,3,APR 16,WEEK,LOAM
1100 DATA CABBAGE,4,APR 17,WEEK,SAND
1110 DATA END,, ,

```

```

>RUN
SHALL I PRINT ALL OF THE
ITEMS ( Y OR N )?

```

```

PLANT  _NBR DATE  _WATER  _SOIL
LETTUCE 1 APR 15 DAILY SAND
CABBAGE 4 APR 17 WEEK LOAM

```

```

>RUN
SHALL I PRINT ALL OF THE
ITEMS ( Y OR N )?
NO
SHALL WE SELECT BASED UPON
PRINT THE ITEM HEADING TO
FOR THE VALUE OF SOIL
OR THE VALUE OF SOIL
PRINT THE VALUE OF SOIL
?

```

```

PLANT  _NBR DATE  _WATER  _SOIL
LETTUCE 2 APR 15 DAILY LOAM
LETTUCE 3 APR 16 WEEK LOAM

```

MAJOR SYMBOL TABLE - GREENHOUSE

I	NAME	DESCRIPTION	I
I	K1	.. COUNT INDICATOR	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	Q\$()	.. SUPPLEMENTAL ITEMS - VALUE IN	I
I	H\$()	.. SUPPLEMENTAL ITEMS - HEADING VALUES	I
I	P\$	.. PLANT NAME	I
I	N\$	.. PLANT/CONTAINER NUMBER	I
I	D\$	.. DATE PLANTED	I
I	X2\$	.. STANDARD ITEM TO SEARCH	I
I	X1\$	.. SUPPLEMENTAL ITEM TO SEARCH	I
I	X\$	.. VALUE OF ITEM TO SELECT	I
I	N	.. NUMBER OF SUPPLEMENTAL ITEMS	I

FUNCTIONS USED

I NAME	.. DESCRIPTION

I TAB	.. FORMATS PRINT LINES
I DIM	.. SINGLE DIMENSION ARRAYS

CB RADIO

Description

This program produces a diary (log) for the CB operator. It can interpret and print all items that the user wants to record in the log.

Functions of the Program

The program provides a formatted output of all, or selected, data records. Supplemental items can be defined by indicating the number of items, and their names, in the first data record. Supplemental items can then be read and printed in the same way as standard items.

Instructions for Use

Prior to running the program, define the supplemental items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

See example data. The first record defines supplemental items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary (log) items are then entered in the following form:

Handle, Call letters, Channel monitored, Supplemental value 1, etc.

Output Description

See example output. Print options allow all, or selected, records to be printed.

```
10 CALL CLEAR
20 REM   CB RADIO OPERATOR'S DIARY
30 REM   ***** DATA INITIALIZATION *****
40 K1=0
50 M=1000
60 DIM Q$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110 READ H$(K)
120 NEXT K
130 PRINT "SHALL I PRINT ALL OF THE": "ITEMS ( Y OR N )?"
140 INPUT A$
150 IF A$="Y" THEN 430
160 PRINT "SHALL WE SELECT BASED UPON:"
170 PRINT "HANDLE (H)"
180 PRINT "CALL LETTERS (L)"
190 PRINT "CHANNEL (C)"
200 PRINT "OR OTHER (O)?"
210 INPUT X2$
220 IF X2$="H" THEN 350
```

```

230 IF X2$="L" THEN 370
240 IF X2$="C" THEN 390
250 PRINT "ENTER THE ITEM HEADING TO": "SEARCH FOR"
260 INPUT X1$
270 IF N=0 THEN 330
280 FOR K=1 TO N
290 IF X1$<>H$(K) THEN 310
300 K1=K
310 NEXT K
320 IF K1<>0 THEN 400
330 PRINT "ITEM HEADING NOT FOUND -": "TRY AGAIN"
340 GOTO 130
350 X1$="HANDEL"
360 GOTO 400
370 X1$="CALL LETTERS"
380 GOTO 400
390 X1$="CHANNEL"
400 PRINT "ENTER THE ";X1$; " TO PRINT"
410 INPUT X$
420 REM ***** HEADINGS *****
430 PRINT
440 PRINT
450 PRINT
460 PRINT "HANDLE";TAB(10);"LETTERS";TAB(18);"CH";
470 IF N=0 THEN 510
480 FOR K=1 TO N
490 PRINT TAB((K-1)*5+21);H$(K);
500 NEXT K
510 PRINT
520 PRINT "-----"
530 IF N=0 THEN 570
540 FOR K=1 TO N
550 REM
560 NEXT K
570 PRINT
580 IF A$="N" THEN 820
590 REM *****
600 REM ***** PRINT OF ALL ITEMS *****
610 FOR I=1 TO M
620 READ P$
630 IF P$="END" THEN 770
640 READ L$,C$
650 IF N=0 THEN 690
660 FOR K=1 TO N
670 READ Q$(K)
680 NEXT K
690 PRINT P$;TAB(10);L$;TAB(18);C$;
700 IF N=0 THEN 740
710 FOR K=1 TO N
720 PRINT TAB((K-1)*2+21);Q$(K);
730 NEXT K
740 PRINT
750 NEXT I
760 REM *****
770 REM ***** PROGRAM TERMINATION POINT *****
780 PRINT
790 PRINT
800 STOP
810 REM *****
820 REM ***** PRINT SELECTED ITEMS *****
830 FOR I=1 TO M
840 READ P$
850 IF P$="END" THEN 770
860 READ L$,C$
870 FOR K=1 TO N
880 IF N=0 THEN 900
890 READ Q$(K)
900 IF K1<>0 THEN 990
910 IF X2$<>"L" THEN 940
920 X3$=L$

```

```

930 GOTO 1010
940 IF X2<>"H" THEN 970
950 X3#=P$
960 GOTO 1010
970 X3#=C$
980 GOTO 1010
990 IF K<>K1 THEN 1010
1000 X3#=Q$(K)
1010 NEXT K
1020 IF X<>X3$ THEN 1090
1030 PRINT P$;TAB(10);L$;TAB(18);C$;
1040 IF N=0 THEN 1080
1050 FOR J=1 TO N
1060 PRINT TAB((J-1)*2+21);Q$(J);
1070 NEXT J
1080 PRINT
1090 NEXT I
1100 GOTO 770
1110 REM *****
1120 REM ***** DATA FOR INITIALIZATION FOLLOWS *****
1130 REM ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS FIRST
1140 DATA 1, TELE
1150 REM *****
1160 DATA GRANNY, KTX9999, 5, 633-7777
1170 DATA HORSEMAN, KTX1111, 7, 333-1100
1180 DATA FISHBAIT, KAAZ111, 40, 333-1983
1190 DATA MONKEY, KPRO123, 92, 224-1234
1200 DATA END, , , ,

```

```

> RUN
H I PRINT ALL OF THE
I T E M S < Y O R N > ?
? Y

```

```

HANDLE --- LETTERS CH TELE ---
GRANNY KTX9999 5 633-7777
HORSEMAN KTX1111 7 333-1100
FISHBAIT KAAZ111 40 333-1983
MONKEY KPRO123 92 224-1234

```

```

> RUN
H I PRINT ALL OF THE
I T E M S < Y O R N > ?
? Y
WE SELECT BASED UPON:
R H C
H I T A R C H C O M P S < L >
T M E Z I U L F L I M W E C O M P S < L >
4 0 R H C H C O M P S < L >
M E Z I U L F L I M W E C O M P S < L >
H I T A R C H C O M P S < L >
H E C H A N N E L T O P R I N T

```

```

HANDLE --- LETTERS CH TELE ---
FISHBAIT KAAZ111 40 333-1983

```

MAJOR SYMBOL TABLE - CB RADIO

I	NAME	DESCRIPTION	I
I	K1	.. COUNT INDICATOR	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	Q\$()	.. SUPPLEMENTAL ITEMS - VALUE IN	I
I	H\$()	.. SUPPLEMENTAL ITEMS - HEADING VALUES	I
I	H1\$	.. HANDLE	I
I	L\$	.. CALL LETTERS	I
I	C\$	.. CHANNEL	I
I	X2\$	.. STANDARD ITEM TO SEARCH	I
I	X1\$	.. SUPPLEMENTAL ITEM TO SEARCH	I
I	X\$	.. VALUE OF ITEM TO SELECT	I
I	N	.. NUMBER OF SUPPLEMENTAL ITEMS	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	DIM	.. SINGLE DIMENSION ARRAYS	I

BOWLING

Description

This program produces a diary for the bowling enthusiast. It can interpret and print all items that the user wants to record for later analysis.

Functions of the Program

The program provides a formatted output of all, or selected, data records. Supplemental items can be defined by indicating the number of items, and their names, in the first data record. Supplemental items can then be read and printed in the same way as standard items.

Instructions for Use

Prior to running the program, define the supplemental items that you want to record. Enter the diary items as they occur.

Data Entry

All data is entered by means of DATA statements.

Data Formats

The first record defines supplemental items and their titles. See the sample data. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then entered in the following form:

Date, Location, Number of games, Score 1, Score 2, . . . ,
Supplemental items

Output Description

See example provided. Print options allow all, or selected, records to be printed.

```
10 CALL CLEAR
20 REM BOWLER'S DIARY PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 K1=0
50 M=1000
60 DIM S$(5)
70 DIM H$(5)
80 READ N
90 IF N=0 THEN 130
100 FOR K=1 TO N
110 READ H$(K)
120 NEXT K
130 PRINT "SHALL I PRINT ALL OF THE": "ITEMS ( Y OR N )?"
140 INPUT A$
150 IF A$="Y" THEN 330
160 PRINT "SHALL WE SELECT BASED UPON": "LANES (L) OR OTHER (O)?"
170 INPUT X2$
180 IF X2$="L" THEN 290
190 PRINT "ENTER THE ITEM HEADING TO": "SEARCH FOR"
200 INPUT X1$
210 IF N=0 THEN 270
```

```

220 FOR K=1 TO N
230 IF X1$(K)>H$(K) THEN 250
240 K1=K
250 NEXT K
260 IF K1<>0 THEN 300
270 PRINT "ITEM HEADING NOT FOUND -": "TRY AGAIN"
280 GOTO 130
290 X1$="LANES"
300 PRINT "ENTER THE VALUE OF ";X1$;" TO PRINT"
310 INPUT X$
320 REM ***** HEADINGS *****
330 PRINT
340 PRINT
350 PRINT
360 PRINT "LANES";TAB(13);"GAMES/AVG";
370 REM
380 IF N=0 THEN 420
390 FOR K=1 TO N
400 PRINT TAB((K-1)*2+23);H$(K);
410 NEXT K
420 PRINT
430 PRINT "-----"
440 REM
450 IF N=0 THEN 490
460 FOR K=1 TO N
470 REM
480 NEXT K
490 PRINT
500 IF A$="N" THEN 840
510 REM *****
520 REM ***** PRINT OF ALL ITEMS *****
530 FOR I=1 TO M
540 READ L$
550 IF L$="END" THEN 790
560 READ G
570 FOR K=1 TO G
580 READ R(K)
590 R(G+1)=R(G+1)+R(K)
600 NEXT K
610 R(G+1)=INT((R(G+1)/G)+.5)
620 IF N=0 THEN 660
630 FOR K=1 TO N
640 READ S$(K)
650 NEXT K
660 PRINT L$;TAB(13);G;
670 REM
680 REM
690 REM
700 PRINT TAB(17);R(G+1);
710 R(G+1)=0
720 IF N=0 THEN 760
730 FOR K=1 TO N
740 PRINT TAB((K-1)*2+22);S$(K);
750 NEXT K
760 PRINT
770 NEXT I
780 REM *****
790 REM ***** PROGRAM TERMINATION POINT *****
800 PRINT
810 PRINT
820 STOP
830 REM *****
840 REM ***** PRINT SELECTED ITEMS *****
850 FOR I=1 TO M
860 R(G+1)=0
870 READ L$
880 IF L$="END" THEN 790
890 READ G
900 FOR J=1 TO G
910 READ R(J)

```

```

920 R(G+1)=R(G+1)+R(J)
930 NEXT J
940 R(G+1)=INT((R(G+1)/G)+.5)
950 FOR K=1 TO N
960 IF N=0 THEN 980
970 READ S$(K)
980 IF K1<>0 THEN 1010
990 X3$=L$
1000 GOTO 1030
1010 IF K<>K1 THEN 1030
1020 X3$=S$(K)
1030 NEXT K
1040 IF X$<>X3$ THEN 1150
1050 PRINT L$;TAB(13);G;
1060 REM
1070 REM
1080 REM
1090 PRINT TAB((G-1)+15);R(G+1);
1100 IF N=0 THEN 1140
1110 FOR J=1 TO N
1120 PRINT TAB((J-1)*2+22);S$(J);
1130 NEXT J
1140 PRINT
1150 NEXT I
1160 GOTO 790
1170 REM *****
1180 REM ***** DATA FOR INITIALIZATION FOLLOWS *****
1190 REM ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS FIRST
1200 DATA 1,DATE
1210 REM *****
1220 DATA HIGHWAY BOWL,3,100,101,134,JUN 1
1230 DATA UPTOWN LANES,3,105,150,123,JUN 8
1240 DATA HIGHWAY BOWL,2,120,131,JUN 15
1250 DATA UPTOWN LANES,3,121,131,142,JUN 22
1260 DATA END,, ,

```

```

> RUN
? PRINT ALL OF THE
? ITEMS ( Y OR N )?

```

```

LANES ----- GAMES/AVG DATE -----
HIGHWAY BOWL 3 112 JUN 1
UPTOWN LANES 3 105 JUN 8
HIGHWAY BOWL 2 120 JUN 15
UPTOWN LANES 3 121 JUN 22

```

```

> RUN
? PRINT ALL OF THE
? ITEMS ( Y OR N )?
? WE SELECT BASED UPON
? ( L ) OR OTHER ( O )?
? ENTER THE VALUE OF LANES
? HIGHWAY BOWL

```

```

LANES ----- GAMES/AVG DATE -----
HIGHWAY BOWL 3 112 JUN 1
HIGHWAY BOWL 2 107 JUN 15

```

MAJOR SYMBOL TABLE - BOWLING

I	NAME	DESCRIPTION	I
I	K1	.. COUNT INDICATOR	I
I	M	.. MAXIMUM NUMBER OF DATA READS	I
I	R()	.. RESULTS (SCORE) ARRAY	I
I	S\$()	.. SUPPLEMENTAL ITEMS -VALUES	I
I	H\$()	.. SUPPLEMENTAL ITEMS - HEADING NAMES	I
I	X2\$	.. STANDARD ITEM TO SEARCH	I
I	X1\$	.. SUPPLEMENTAL ITEM TO SEARCH	I
I	X\$	.. VALUE OF ITEM TO SELECT	I
I	D\$	.. DATE	I
I	L\$	.. LANES	I
I	G	.. NUMBER OF GAMES	I

FUNCTIONS USED

I	NAME	DESCRIPTION	I
I	TAB	.. FORMATS PRINT LINES	I
I	INT	.. CONVERTS NUMBER TO INTEGER	I
I	DIM	.. SINGLE DIMENSION ARRAY	I

GENERAL PURPOSE DIARY

Description

This program provides a general purpose diary that can be used for recording many different activities. It can interpret and print all items that the user wants to record.

Functions of the Program

The program provides a formatted output of all, or selected, data records. All items contained in the data records are defined by indicating the number of items and their names in the first data record. These items can then be read and printed as if they had originally been programmed for.

Instructions for Use

Determine the items to be recorded in the records. Enter the diary items as they occur.

Data Entry

All DATA is entered by means of DATA statements.

Data Formats

See the sample data. The first record defines the number of items and their titles. Its form is:

Number of items, Title 1, Title 2, etc.

Diary items are then entered using the following form:

Value 1, Value 2, etc.

Output Description

See example provided. Print options allow all, or selected, records to be printed.

```
10 CALL CLEAR
20 REM GENERAL PURPOSE DIARY PROGRAM
30 REM ***** DATA INITIALIZATION *****
40 M=1000
50 DIM S$(10)
60 DIM H$(10)
70 READ N
80 IF N=0 THEN 510
90 FOR K=1 TO N
100 READ H$(K)
110 NEXT K
120 PRINT "SHALL I PRINT ALL OF THE";"ITEMS (Y OR N)";
130 INPUT A$
140 IF A$="Y" THEN 260
150 PRINT "ENTER THE ITEM TO SEARCH"
160 INPUT X1$
170 FOR K=1 TO N
180 IF X1$<>H$(K) THEN 200
190 K1=K
```

```

200 NEXT K
210 IF K1<>0 THEN 240
220 PRINT "ITEM HEADING NOT FOUND -": "TRY AGAIN"
230 GOTO 120
240 PRINT "ENTER THE VALUE OF ";X1$;" TO PRINT"
250 INPUT X$
260 PRINT
270 PRINT
280 PRINT
290 FOR K=1 TO N
300 PRINT TAB((K-1)*8+1);H$(K);
310 NEXT K
320 PRINT
330 REM
340 PRINT "-----"
350 REM
360 PRINT
370 IF A$="N" THEN 560
380 REM *****
390 REM ***** PRINT OF ALL ITEMS *****
400 FOR I=1 TO M
410 FOR K=1 TO N
420 READ S$(K)
430 IF S$(1)="END" THEN 510
440 NEXT K
450 FOR K=1 TO N
460 PRINT TAB((K-1)*8+1);S$(K);
470 NEXT K
480 PRINT
490 NEXT I
500 REM *****
510 REM ***** PROGRAM TERMINATION POINT *****
520 PRINT
530 PRINT
540 STOP
550 REM *****
560 REM ***** PRINT OF SELECTED ITEMS *****
570 FOR I=1 TO M
580 FOR K=1 TO N
590 READ S$(K)
600 IF S$(1)="END" THEN 510
610 IF K<>K1 THEN 670
620 IF X$<>S$(K) THEN 670
630 FOR J=1 TO N
640 PRINT TAB((J-1)*8+1);S$(J);
650 NEXT J
660 PRINT
670 NEXT K
680 NEXT I
690 GOTO 510
700 REM *****
710 REM ***** DATA FOR INITIALIZATION FOLLOWS *****
720 REM ENTER NUMBER OF DIARY ITEMS FOLLOWED BY THEIR HEADINGS FIRST
730 DATA 4, DATE, COURSE, WIND, PTS
740 DATA JUL 1, LINCOLN, NONE, 77
750 DATA JUL 3, CUMB., MED, 80
760 DATA JUL 6, HI-VIEW, HIGH, 85
770 DATA JUL 8, LINCOLN, LOW, 82
780 DATA END,,

```

```

>RUN
SHALL I PRINT ALL OF THE
ITEMS (Y OR N)? Y

```

DATE	COURSE	WIND	PTS
JUL 1	LINCOLN	NONE	77
JUL 3	CUMB.	MED	80
JUL 6	HI-VIEW	HIGH	85
JUL 8	LINCOLN	LOW	82

```

>RUN          PRINT ALL OF THE
SHELL       OR N) ?
INTERACT    THE ITEM TO SEARCH
IVE         THE VALUE OF COURSE
ENT         TO CUMB.
TO         CUMB.
?         CUMB.

```

```

DATE  _____ COURSE  WIND  _____ PTS
JUL 3   CUMB.   NONE   77

```

MAJOR SYMBOL TABLE - GENERAL PURPOSE DIARY

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I K     .. COUNT INDICATOR                           I
I M     .. MAXIMUM NUMBER OF DATA READS             I
I S$( ) .. VALUE OF ITEMS                             I
I H$( ) .. HEADINGS OF ITEMS                         I
I N     .. NUMBER OF ITEMS RECORDED FOR EACH TRANSACTIONS I
I X1$   .. ITEM TO SEARCH                             I
I X$    .. VALUE OF ITEM TO SELECT                   I
I-----I

```

FUNCTIONS USED

```

I-----I
I NAME  .. DESCRIPTION                               I
I-----I
I TAB   .. FORMATS PRINT LINES                       I
I DIM   .. SINGLE DIMENSION ARRAYS                   I
I-----I

```

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